Access DB#

#### RECEIVED SEARCH REQUEST FORM

UCT 21 2	Scientific and	Fechnical Informa	tion Center	
Requester's Full Name (C) Art Unit: /6 // ( Mail Box and Bldg/Room)	and the second s			16-21-0L
If m re than one search i	s submitted, please	prioritize searche	in order of most	DISK E-MAIL
Please provide a detailed stateme Include the elected species or strutility of the invention. Define at known. Please attach a copy of the	ent of the search topic, and actures, keywords, synony	describe as specifically ms, acronyms, and regi	7 ************************************	**************************************
Title of Invention:	-	, "		
Inventors (please provide full na	ames):		-//	<del>\</del>
	~		- PA	
Earliest Priority Filing Date:				<u> </u>
*For Sequence Searches Only * Plea	se include all pertinent info		<b>v</b>	,
				) along with the
Pleas	seal !	SEO I/	pro12	of .
69/838	028.	,	(tuo)	is the state of th
17		•	· <u>-</u> .	
	_	~\ <sup>0</sup> \		and the same of th
•	10	) '	Point of Contact: Beverly Shears	•
	(	•	Technical Info. Speciali CM1 1E05 Tel: 308-49	st
/				
		<u>.</u>		
:	•		•	
				•
1000		•		
John			,	٠.
*****************	***			•
AFF USE ONLY	Type of Search	**************************************	· · · · · · · · · · · · · · · · · · ·	****
cher: Boverly e.4	794 NA Sequence (#)	STN	rs and cost where applicable	
cher Phone #:	AA Sequence (#)	Dialog 16		- A Section of the se
her Location:	Structure (#)	Questel/Orbit		
Searcher Picked Up:	Bibliographic	Dr.Link		
Completed: 10-22-02   her Prep & Review Time: 3	Litigation	Lexis/Nexis		
<del></del>	Fulltext	Sequence Systems		
cal Prep Time:	Patent Family			<del></del>

CGN

Other (specify)

Online Time:

PTO-1590 (8-01)

THIS PAGE BLANK (USPTO)

```
Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         October 21, 2002, 16:08:45; Search time 113 Seconds (without alignments) 1404.807 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-838-028-2
2318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3502263 seqs, 351980561 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MESSPIPQSSGNSSTLGRVP......SDIIMSDSYLRPAASPRLES 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pending_Patents_AA_Main:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /cgn2_6/ptodata/1/paa/US084_COMB.pep:*
/cgn2_6/ptodata/1/paa/US085_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /cgn2_6/ptodata/1/paa/US07_COMB.pep:*
/cgn2_6/ptodata/1/paa/US080_COMB.pep:*
/cgn2_6/ptodata/1/paa/US081_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /cgn2_6/ptodata/1/paa/PCTUS_COMB.pep:
/cgn2_6/ptodata/1/paa/US06_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /cgn2_6/ptodata/1/paa/US082_COMB.pep:*
/cgn2_6/ptodata/1/paa/US083_COMB.pep:*
/cgn2_6/ptodata/1/paa/US098_COMB.pep:*
/cgn2_6/ptodata/1/paa/US099_COMB.pep:*
/cgn2_6/ptodata/1/paa/US101_COMB.pep:*
/cgn2_6/ptodata/1/paa/US101_COMB.pep:*
/cgn2_6/ptodata/1/paa/US60_COMB.pep:*
                                                                                                                                                                                                                    /cgn2_6/ptodata/1/paa/US091_COMB.pep:
/cgn2_6/ptodata/1/paa/US092_COMB.pep:
/cgn2_6/ptodata/1/paa/US093_COMB.pep:
/cgn2_6/ptodata/1/paa/US094_COMB.pep:
                                                                                                                                                                                                                                                                                                                                     /cgn2_6/ptodata/1/paa/US089_COMB.pep:*
/cgn2_6/ptodata/1/paa/US090_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                          /cgn2_6/ptodata/1/paa/US086_COMB.pep:*
/cgn2_6/ptodata/1/paa/US087_COMB.pep:*
/cgn2_6/ptodata/1/paa/US088_COMB.pep:*
                                                                                                                                     /ptodata/1/paa/US095_COMB.pep:*/ptodata/1/paa/US096_COMB.pep:*/ptodata/1/paa/US097_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _COMB . pep :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3502263
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Z

7	σ	Ų	4	ω	2	ب	Result No.
2318	2318	2318	2318	2318	2318	2318	Score
100.0	100.0	100.0	100.0	100.0	100.0	100.0	Query Match
451	451	451	451	451	451	451	Query Match Length DB
22	22	22	21	21	19	ь ;	ВB
US-09-860-797-2	US-09-838-028-2	US-09-815-499-2	US-09-740-033-2	US-09-714-008A-12	9 US-09-533-687-2	PCT-US01-10436-3	ID
Sequence 2, Appli	Sequence 2. Appli	Sequence 2, Appli	Sequence 2, Appli	Sequence 12, Appl	Sequence 2, Appli	Sequence 3, Appli	Description

**!**/

		AT TOWNSHIP				
e 1107,	equenc	S-60-194-091-110	26	6		90.
e 1124,	equenc	-60-192-587-11	26	δ		٠
e 4, Ap	equenc	S-09-740-033-4	21	$\boldsymbol{\mu}$	5	21.
e 12, A	equenc	-60-329-926-1	26	Ν	5	$\sim$
e 12, A	equ	60-317-661-1	26	Ν	5	Ν
е 37,	equ	-09-864-029-37	22	Ν	5	N
e 247	equen	S-60-196-713-24	26	δ	8	æ
e 125	eque	-60-192-587-125	26	8		9
e 221	egue	-60-194-114-2	26	0	ω.	99.
e 306	Sequenc	60-192-738-30	26	0	ω.	9.
e 263	Sequenc	60-186-281-26	26	9	ω.	99.
9 125	Sequenc	-60-192-587-12	26	Ν	0.	16
e 36,	Sequenc	-09-864-029-3	22	G	5	27
360	Sequenc	09-461-436-3	18	S	.5	27
e 52,	Sequenc	-09-461-436-5	18	5	5	27
52,	Sequence	-08-513-974-5	9	ú	5	27
e 11,	Sequenc	S-60-329-926-	26	$\mathbf{L}$	0	10
9 11,	Sequenc	S-60-317-661-1	26	$\vdash$	0.	10
4,	Sequenc	S-09-838-028-4	22	4	5	20
e 124	Sequenc	-60-229-515-12	26	7	5	21
≥ 974	Sequence	S-60-229-515-	26	Ü	5	21
e 407	Sequenc	-60-212-655-40	26	Ġ	5	21
≥ 939	Sequence	S-60-229-515-93	26	Ñ	5	21
9 7.05	Sequenc	S-60-212-655-70	26	Ň	5	21
≥ 84,	Sequenc	-10-096-511-	24	G	9	31
84,	Sequenc	8-09-995-543-8	23	Ç,	9	3
e 84	Sequenc	S-09-714-008A-	21	451	99	2313
e 24,	equen	S-09-864-029-2	22	ū	00.	31
e 100	egue	S-10-096-511-10	24	g	00.	31
e 100	9	-09-995-543-	23	9	00.	31
e 100	Sequenc	S-09-714-008A-	21	6	00.	31
e 2,	ტ.	-60-329-926-	26	5	00.	31
e 2,	egu	S-60-317-661-	26	S	00.	31
e 1,	eque	S-60-202-278-1	26	5	0	31
e 12,	equen	-10-096-511-	24	ū	00.	31
е 12,	equen	S-09-995-543-1	23	S	00	31
ē3, A	equ	9-980-049-	23	5	00.	31
e 22, Ap	equen	S-09-864-029-	22	ū	00.	31

## ALIGNMENTS

RESULT 1 PCT-US01-10436-3 Sequence 3, Applicat GENERAL INFORMATION: APPLICANT: INCYTE G CURRENT APPLICATION NUMBER: PCT/US01/10436
CURRENT FILING DATE: 2001-03-29
PRIOR APPLICATION NUMBER: 60/193,051
PRIOR FILING DATE: 2000-03-29
PRIOR APPLICATION NUMBER: 60/195,155
PRIOR FILING DATE: 2000-04-06
PRIOR FILING DATE: 2000-04-06
PRIOR FILING DATE: 2000-04-20
PRIOR FILING DATE: 2000-04-20 APPLICANT: APPLICANT: APPLICANT: APPLICANT:
APPLICANT: APPLICANT: WALIA, Narinder K.
APPLICANT: DAS, Debopriya
TITLE OF INVENTION: G-PROTEIN COUPLED RECEPTORS
FILE REFERENCE: PI-0072 PCT APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: INCYTE GENOMICS, INC. Application PC/TUS0110436 NGUYEN, Danniel B. PATTERSON, Chandra GRAUL, Richard KHAN, Farrah A. HAFALIA, April YANG, Junming AU-YOUNG, Janice LAL, Preeti BAUGHN, Mariah R. TRIBOULEY, POLICKY, Jennifer L. Catherine M. 60/200,551

```
Š,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                          ; TYPE: PRT
; ORGANISM: HOMO
US-09-533-687-2
                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                        US-09-533-687-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PCT-US01-10436-3
                                                                                                                                                            Sequence 2, Application US/09533687
GENERAL INFORMATION:
APPLICANT: Usman Shabon
APPLICANT: Mahanandeeshwar Gattu
APPLICANT: David Michalovich
APPLICANT: Nabil Elshourbagy
TITLE OF INVENTION: MOLECULAR CLONING OF
TITLE OF INVENTION: (AXOR64)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 2000-04-28
PRIOR APPLICATION NUMBER: 60/202,278
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PERL Program
SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 451;
Query Match
                                                                               SEQ ID NO 2
                                                                                             NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
                                                                                                                        CURRENT APPLICATION NUMBER: US/09/533, CURRENT FILING DATE: 2000-03-23
                                                                                                                                                    FILE REFERENCE: GP-70684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 451
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: misc_feature
OTHER INFORMATION: Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                  LENGTH: 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN 60
                                                                                                                                                                                                                                                                                                                            ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILIVVYCSMFRVARVAAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                    LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
                                                                                                                                                                                                                                                                                                                                                                                  KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAVMAVIAKTPALRKEVEVEHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                        SAPIENS
                                                                                              for Windows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Incyte ID No: 3226980CD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                              Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 2318; DB 1;
Pred. No. 1.3e-207;
 Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
 2318;
                                                                                                                                                                                                                                                                                                                                                       451
                                                                                                                                                                                                                                                                                                                               451
                                                                                                                                                                            A 7TM RECEPTOR
 DB
19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                       Ş
                                                    В
                                                                             Qy
                                                                                                             Вb
                                                                                                                                     ð
                                                                                                                                                                                                                         ; ORGANISM: Homo sapiens US-09-714-008A-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-714-008A-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                  SEQ ID NO 12
LENGTH: 451
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 12, Application US/09714008A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/714,008A CURRENT FILING DATE: 2000-11-16 Prior application data removed - consult PA NUMBER OF SEQ ID NOS: 133 SOFTWARE: PatentIn version 3.0
                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Chen, Rupong
APPLICANT: Dang, Huong T.
APPLICANT: Lowitz, Kevin P.
APPLICANT: Lowitz, Kevin P.
TITLE OF INVENTION: Non-Endogenous, Constitutively Activated Human
TITLE OF INVENTION: Receptors
FILE REFERENCE: AREN0086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
121
                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                      61
                                                                                 61
                                                                                                                            1 MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFEMLLLDLTAVAGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAVMAVIAKTPALRKEVEVEHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYLE 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MESSPIPOSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
           LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                    AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ETSEFLEQQLTSDIIMSDSYLRPAASPRLES 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILIVYYCSMFRVARVAAM
                                                                                                             MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAVMAVIAKTPALRKEVEVEHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYLE
LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                   451;
                                                                                                                                                                                                                                                                  451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                             100.0%; Score 2318; DB 21; 100.0%; Pred. No. 1.3e-207;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.
                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. 1.3e-207; Mismatches 0;
                                                                                                                                                                                                                                                                                                                        consult PALM
                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     451
                                                                                                                                                                                                                                                                                                                          ဝူ
                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                        file
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                   Indels
                                                                                                                                                                                              Length
                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                             က
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
180
                                                                                                                                                                                                                                                                                                                                                                                             Protein-Coupl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                   0
```

```
LENGTH: 451
; TYPE: PRT
; ORGANISM: Human
US-09-740-033-2
       ş
                         ₽
                                       δ
                                                              В
                                                                             δ
                                                                                                밁
                                                                                                             δõ
                                                                                                                                   멍
                                                                                                                                                 δ
                                                                                                                                                                   В
                                                                                                                                                                                     δÃ
                                                                                                                                                                                                           ₽
                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 4
US-09-740-033-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     당. &
                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 2, Application US/09740033
GENERAL INFORMATION:
APPLICANT: GAN, Weiniu et al
                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/740,033
CURRENT FILING DATE: 2000-12-20
NUMBER OF SEQ ID NOS: 4
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 2
                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: ISOLATITLE OF INVENTION: RECITITLE OF INVENTION: PROTEILE REFERENCE: CL001056
                          361
                                           361
                                                              301
                                                                                                                                                       181
                                                                                                                                                                        121
                                                                                                                                                                                           121
        421
                                                                                301
                                                                                                  241
                                                                                                                  241
                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                             61
                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                  -
                                                                                                                                                                                                                                             MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN 60
                                                           QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW 300
                                                                                                                                  KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE 420
                                                                                                                                                                                LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                   AAVMAVIAKTPALRKEVEVEHICLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYLE 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ETSEFLEQQLTSDIIMSDSYLRPAASPRLES 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ETSEFLEQQLTSDIIMSDSYLRPAASPRLES 451
                                                                                                QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                      LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                           AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                    451;
                                                                                                                                                                                                                                                                                  100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                            ISOLATED HUMAN G-PROTEIN COUPLED RECEPTORS, NUCLEIC ACID MOLECULES PROTEINS, AND USES THEREOF
                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                  Score 2318; DB 21
Pred. No. 1.3e-207
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         451
                                                                                                                                                                                                                                                                                                    DB 21;
                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                        ENCODING HUMAN
                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                    240
                                                                                                                                                                      180
                                                                                                                                                                                         180
                                                                                                                                                                                                           120
                                                             360
                                                                                                300
                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                   0
Sequence 2, Applicactor.
Sequence 2, Applicactor.
GENERAL INFORMATION:
APPLICANT: Lind, Peter
APPLICANT: Berthold, Malin
TITLE OF INVENTION: Novel G
                                                           RESULT 6
US-09-838-028-2
                                                                                                Вb
                                                                                                                Š
                                                                                                                                  ₽
                                                                                                                                                 Qy
                                                                                                                                                                      밁
                                                                                                                                                                                      QY
                                                                                                                                                                                                          망
                                                                                                                                                                                                                         ρy
                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                              ρy
                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                      日
                                                                                                                                                                                                                                                                                                                                      QΥ
                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                ; TYPE: PRT
; ORGANISM: Homo
US-09-815-499-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 5
US-09-815-499-2
                                                                                                                                                                                                                                                                                                                                                                                            Matches 451;
                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 451
                                                                                                                 421
                                                                                                421
                                                                                                                                   361
                                                                                                                                                                                                                                               181
                                                                                                                                                    361
                                                                                                                                                                      301
                                                                                                                                                                                         301
                                                                                                                                                                                                           241
                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                         \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                        sapier
              Malin
Novel G
```

```
APPLICANT: Shabon, Usman
TITLE OF INVENTION: Molecular Cloning of a 7TH
FILE REFERENCE: GP70684-1
CURRENT APPLICATION NUMBER: US/09/815,499
CURRENT FILING DATE: 2001-03-23
PRIOR APPLICATION NUMBER: 09/533,687
PRIOR FILING DATE: 2000-03-23
PRIOR PPLICATION NUMBER: GB 0027166.8
PRIOR FILING DATE: 2000-11-07
NUMBER OF SE0 ID NOS: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 2, Application GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Elshourbagy, N
APPLICANT: Gattu, Mahana
APPLICANT: Michalovich,
APPLICANT: Shabon, Usmar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: FastSEQ for Windows Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN 60
                                                                                                                                                                                                  ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                            AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALEGEVACRLYLF
                                                                               KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                       MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                               KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                       RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAM
                                                                                                                                                                                                                                                                                                                                                                                                            AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gattu, Mahanandeeshwar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; ilarity 100.0%; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/09815499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nabil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 2318; DB 22;
Pred. No. 1.3e-207;
; Mismatches 0;
                               451
451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7TM Receptor (AXOR64)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                    360
                                                                                                                                   360
                                                                                                                                                                                                      300
                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
```

US/09838028

Protein-Coupled

```
APPLICANT: PETZET INC.

APPLICANT: MARILYN Evelyn Lewis
APPLICANT: Marilyn Evelyn Lewis
APPLICANT: Marilyn Evelyn Lewis
APPLICANT: Nicola Melanie Robas
TITLE OF INVENTION: Novel Polypeptide
FILE REFERENCE: PCS10924APME
CURRENT APPLICATION NUMBER: US/09/860,797
CURRENT FILING DATE: 2001-05-18
PRIOR APPLICATION NUMBER: GB 0012248.1
PRIOR FILING DATE: 2000-05-19
PRIOR FILING DATE: 2001-03-23
PRIOR APPLICATION NUMBER: US 60/211,421
PRIOR APPLICATION NUMBER: US 60/211,421
PRIOR APPLICATION NUMBER: US 60/211,421
PRIOR APPLICATION NUMBER: US 60/283,441
PRIOR FILING DATE: 2001-04-12
NUMBER OF SEQ ID NOS: 4
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/838,028
CURRENT FILING DATE: 2001-04-19
PRIOR APPLICATION NUMBER: 60/198,600
PRIOR FILING DATE: 2000-04-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PATENTIN VERSION 3.0
SEQ ID NO 2
LENGTH: 451
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                          US-09-860-797-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; ORGANISM: Homo sapiens US-09-838-028-2
                                                                                                                                                                                                                                                                                                                          Sequence 2, Application GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 451; Conservative (
TYPE: PF
                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RVSWEEGAPSVPPGCSLOWSHSAYCQLFVVVFAVLYFLLPLLLILLVVYCSMFRVARVAAM 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                                                                                                                                                                                                             ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAVMAVIAKTPALRKEVEVEHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAVMAVIAKTPALRKEVEVEHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYLE
               451
                                                                                                                                                                                                                                                                                                                                             US/09860797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 2318; DB 22;
Pred. No. 1.3e-207;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                             451
                                                                                                                                                                                                                                                                                                                                                                                                                                                           451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
```

```
RESULT 8
US-09-864-029-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; ORGANISM: Homo sapiens US-09-860-797-2
                           CURRENT APPLICATION NUMBER: US/09/864,029
CURRENT FILING DATE: 2001-05-23
PRIOR APPLICATION NUMBER: 60/206,757
PRIOR FILING DATE: 2000-05-24
PRIOR APPLICATION NUMBER: 60/214,372
PRIOR FILING DATE: 2000-06-28
PRIOR APPLICATION NUMBER: 60/219,786
PRIOR APPLICATION NUMBER: 60/219,786
PRIOR APPLICATION NUMBER: 60/219,786
                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 22, Application US/09864029 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 451;
                                                                                                                                                APPLICANT: MacDougall, John R.
APPLICANT: Stone, David J.
APPLICANT: Smithson, Glennda
APPLICANT: Smithson, Glennda
TITLE OF INVENTION: NOVEL GPCR-LIKE PROTEINS AND NUCLEIC ACIDS ENCODING
TITLE OF INVENTION: SAME
FILE REFERENCE: 21402-022
                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Padigaru, Muralidhara
APPLICANT: Spytek, Kimberly A.
APPLICANT: Majumder, Kumud
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
APPLICATION NUMBER: 60/207,020 FILING DATE: 2000-05-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF
                                                                                                                                                                                                                                                                             Szekeres Jr., Edward S
Alsobrook II, John P.
Burgess, Catherine E.
Shimkets, Richard A.
                                                                                                                                                                                                                                    Taupier Jr., Raymond
Casman, Stacie J.
Gangolli, Esha A.
                                                                                                                                                                                                                                                                                                                                         Majumder, Kumud
Tchernev, Velizar T.
Grosse, William M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 2318; DB 22; 100.0%; Pred. No. 1.3e-207; O. Mismatches 0;
                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
```

```
RESULT 9
US-09-980-049-3
                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                              ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                               Sequence 3, Application US/09980049 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 2001-03-13
NUMBER OF SEQ ID NOS: 59
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR FILING DATE: 2000-12-10
PRIOR APPLICATION NUMBER: 60/271,645
PRIOR FILING DATE: 2001-02-26
PRIOR APPLICATION NUMBER: 60/274,809
PRIOR FILING DATE: 2001-03-09
PRIOR FILING DATE: 2001-03-09
                                                                                       APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Homo sapiens -09-864-029-22
                                        APPLICANT:
                                                                 APPLICANT:
                                                                                                                                         APPLICANT: INCYTE GENOMICS, INC. APPLICANT: POLICKY, Jennifer L.
                APPLICANT:
                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 451
TYPE: PRT
                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/256,402 FILING DATE: 2000-12-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/239,542 FILING DATE: 2000-10-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/275,590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                            ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                        KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                         LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF
                                                                                                                                                                                                                                                                                                                                                                                                        QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                                                                                                                                           KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                            LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF
                                                                                                                                                                                                                                                                                                                                                                                             QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                                                                                         ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                451;
                                    TANG, Y. Tom
BAUGHN, Mariah R.
GRAUL, Richard
KHANJ, Farrah A.
NGUYEN, Danniel B.
PATTERSON, Chandra
LAL, Preeti
                                                                                                                            TRIBOULEY, Catherine M.
              AU-YOUNG, Janice
YANG, Junming
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000-07-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 2318; DB 22;
Pred. No. 1.3e-207;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                  451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
APPLICANT: Chen, Rupong T. T.
APPLICANT: Loang, Huong T. T.
APPLICANT: Lowitz, Kevin P. P.
APPLICATION: Non-Endogenous, Cons
TITLE OF INVENTION: Receptors
FILE REFERENCE: Aren-0311
CURRENT APPLICATION NUMBER: US/09/995,54
CURRENT FILING DATE: 2001-11-27
PRIOR APPLICATION NUMBER: 09/170,496
PRIOR FILING DATE: 1998-10-13
PRIOR FILING DATE: 2000-08-21
PRIOR APPLICATION NUMBER: 60/226,760
PRIOR APPLICATION NUMBER: 09/714,008
                                                                                                                                                                                     RESULT 10
US-09-995-543-12
                                                                                                                                                                                                                                                                 δõ
                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   γQ
                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 3
LENGTH: 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 45
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PERL Program
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Homo sapiens
                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
```

```
; OTHER INFORMATION: Incyte ID No: 3226980CD1 US-09-980-049-3
                                                                         Sequence 12, Application US/09995543 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: WALIA, Narinder K.
APPLICANT: DAS, Debopriya
APPLICANT: DAS, Debopriya
TITLE OF INVENTION: G-PROTEIN COUPLED RECEPTORS
FILE REFERENCE: p1-0072 pCT
CURRENT APPLICATION NUMBER: US/09/980,049
CURRENT FILING DATE: 2001-11-28
PRIOR APPLICATION NUMBER: 60/13,051; 60/195,155; 60/199,084; 60/200,551; 60/7
PRIOR FILING DATE: 2000-03-29; 2000-04-06; 2000-04-20; 2000-04-28; 2000-05-05
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
                                                                                                                                                                                                        ETSEFLEQQLTSDIIMSDSYLRPAASPRLES 451
                                                                                                                                                                                                                                                                                  KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                              LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF
                                                                                                                                                                                                                                                                                                                                                                                                                                    QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                          LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF
                                                                                                                                                                                                                                                                                                                                                                                                                  QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                                      ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 2318; DB 23;
Pred. No. 1.3e-207;
Mismatches 0;
Constitutively Activated Human
                                                                                                                                                                                      451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
 G Protein-Coupl
                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/202,2
```

```
JR F1.
JR APPL.
AIOR APPL.
AFIOR FILING DA1.
PRIOR APPLICATION
PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 2000-09-26
PRIOR APPLICATION NUMBER: 60/235,418
PRIOR APPLICATION NUMBER: 60/242,332
TOR FILING DATE: 2000-10-20
PAPPLICATION NUMBER: 60/242,343
APPLICATION NUMBER: 60/242,343
                                            á
     밁
                                                                                                밁
                                                                                                                                                õ
                                                                                                                                                                                                    망
                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Homo sapiens US-09-995-543-12
                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 45
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
     181
                                                    181
                                                                                                   121
                                                                                                                                                     121
                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                     Н
                                                                                                                                                                                                                                                                                                                                                         ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60 FILING DATE: 2000-02-1 APPLICATION NUMBER: 60 FILING DATE: 2000-03-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1999-12-23
APPLICATION NUMBER: 60/171,900
FILING DATE: 1999-12-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/195,899 FILING DATE: 2000-04-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/171,901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1999-11-17
APPLICATION NUMBER: 60/171,902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/166,099 FILING DATE: 1999-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/189,259 FILING DATE: 2000-03-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/166,369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1999-11-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: APPLICATION
RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILIVVYCSMFRVARVAAM
                                                                                                                                                                                                                                                                                                     MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
                                                                                                                                LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                    AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF
                                                                                                                                                                                                                              AAVMAVIAKTPALRKFVEVFHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYLF
                                                                                                   LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER: PCT/US99/23938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000-04-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/189,258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/181,749
                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                         Score 2318; DB 23;
Pred. No. 1.3e-207;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                         60
                                                 240
                                                                                                   180
                                                                                                                                                     180
                                                                                                                                                                                                    120
     240
```

```
QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-096-511-12; Sequence 12, Application US/10096511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ρ
                                                             Q
                                                                                            DЬ
                                                                                                                     20
                                                                                                                                                  Вb
                                                                                                                                                                         Ş
                                                                                                                                                                                                        Вb
                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                    Дb
                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                          ; TYPE: PRT
; ORGANISM: HOMO
US-10-096-511-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Unett, David J.

APPLICANT: Lerner, Michael
TITLE OF INVENTION: Endogenous And Non-Endog
TITLE OF INVENTION: Receptors
FILE REFERENCE: Aren0323
CURRENT APPLICATION NUMBER: US/10/096,511
CURRENT FILING DATE: 2002-03-12
PRIOR APPLICATION NUMBER: 09/985,543
PRIOR APPLICATION NUMBER: 09/985,543
PRIOR FILING DATE: 2001-11-27
            δÃ
                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 133
SOFTWARE: PatentIn version
SEQ ID NO 12
LENGTH: 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 451; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Chen, Ruoping APPLICANT: Dang, Huong APPLICANT: Lowitz, Kevin APPLICANT: Behan, Domin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                             241
                                                                                                                                                                                                         121
              361
                                       301
                                                                 301
                                                                                                                       241
                                                                                                                                                   181
                                                                                                                                                                             181
                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                    __
                                                                                                                                                                                                                                                                                                                                            \vdash
                                                                                                                                                                                                                                                                                                                                  MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAVMAVIAKTPALRKFVEVFHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYLF 120
                                                                                                                                                                                                                                                                                                                    MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                    LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF 360
                                                                                                          QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLLLVVYCSMFRVARVAAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                                                                                                              AAVMAVIAKTPALRKEVEVEHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYLE 120
              KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                             QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                  RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAM
Lowitz, Kevin P. P. Behan, Dominic P. Chalmers, Derek T.
                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 2318; DB 24; llarity 100.0%; Pred. No. 1.3e-207; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Non-Endogenous Versions Of Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         451
                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                  451;
                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                       300
                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       മ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
               420
                                                                                             300
                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Protein-Coup
                                                                                                                                                                                                                                                                                                                                                                       0
```

```
Sequence 1, Application US/60202278

GENERAL INFORMATION:
APPLICANT: Lal, Preeti
APPLICANT: Lal, Preeti
APPLICANT: Policky, Janice
APPLICANT: Policky, Jennifer L.
TITLE OF INVENTION: G-PROTEIN COUPLED RECEP
FILE REFERENCE: PI-0088 P
CURRENT APPLICATION NUMBER: US/60/202,278
CURRENT FILING DATE: 2000-05-05
UNMBER OF SEQ ID NOS: 2
SOFTMARE: PERL Program
SEQ ID NO 1
LENGTH: 451
RESULT 13
US-60-317-661-2
; Sequence 2, Application US/60317661
; GENERAL INFORMATION:
; APPLICANT: Bristol-Myers Squibb Company
; TITLE OF INVENTION: HGPREMY32, EXPRESSED HIGHLY IN BRAIN TISSUE
                                                                                                                             δ
                                                                                                                                                          g 8
                                                                                                                                                                                              В
                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                 οy
                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; NAME/KEY: misc_feature
; OTHER INFORMATION: Incyte
US-60-202-278-1
                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-60-202-278-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Simi
Matches 451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 451
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                             421
                                                                                                                                   421
                                                                                                                                                          361
                                                                                                                                                                                  361
                                                                                                                                                                                                       301
                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                        _
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
                                                                                                                                                                                                     ETSEFLEQQLTSDIIMSDSYLRPAASPRLES 451
                                                                                                                                                                      KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                    AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF 120
                                                                                                            ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                      MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                        KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                           AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ID No: 3226980CD1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 2318; DB 26;
Pred. No. 1.3e-207;
); Mismatches 0;
                                                                                                             451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                420
                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                   COUPLED
                                                                                                                                                          420
                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                  RECEPTOR
```

```
В
                    Qy
                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                       DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                       US-60-329-926-2
                                                                                                                                                                                                                                                                                                  US-60-329-926-2
                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                         рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; ORGANISM: Homo US-60-317-661-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; SEQ ID NO 2
; LENGTH: 451
; TYPE: PRT
                                                 Query Match
Best Local S
Matches 451
                                                                                                          APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL HUMAN G-PROTEIN COUPLED
TITLE OF INVENTION: HGPRBMY32, EXPRESSED HIGHLY IN BRAIN TISSUE
FILE REFERENCE: D0183 pspl
CURRENT APPLICATION NUMBER: US/60/329,926
CURRENT FILING DATE: 2001-10-16
NUMBER OF SEQ ID NOS: 53
SOFTWARE: Patentin version 3.0
SEQ ID NO 2
LENGTH: 451
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                        Sequence 2, Applicat GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILE REFERENCE: D0183 psp
CURRENT APPLICATION NUMBER: US/6(
CURRENT FILING DATE: 2001-09-06
NUMBER OF SEQ ID NOS: 51
SOFTWARE: PatentIn version 3.0
                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 AAVMAVIAKTPALRKEVEVEHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYLE
                         -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                      RVSWEEGAPSVPPGCSLQWSHSAYCQLEVVVFAVLYFLLPLLLILLVVYCSMFRVARVAAM 240
                                                                                                                                                                                                                                                                                                                                                     ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                 ETSEFLEQQLTSDIIMSDSYLRPAASPRLES 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYLF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                                                                    2, Application US/60329926
                                                 100.0%; ilarity 100.0%; Conservative C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/60/317
                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 2318; DB 26;
Pred. No. 1.3e-207;
); Mismatches 0;
                                                              Score 2318; DB 26;
Pred. No. 1.3e-207;
                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 , 661
                                                                                                                                                                                                                                                                                                                                                      451
                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                RECEPT
```

```
GENERAL INFORMATION:

APPLICANT: Chen, Rupong T.

APPLICANT: Dang, Huong T.

APPLICANT: Lowitz, Kevin P.

TITLE OF INVENTION: Non-Endogenous, Constitut
TITLE OF INVENTION: Receptors

FILE REFERENCE: ARENO086

CURRENT APPLICATION NUMBER: US/09/714,008A

CURRENT FILING DATE: 2000-11-16

PATIOR APPLICATION data removed - consult PALM
NUMBER OF SEO ID NOS: 133

SOFTWARE: Patentin version 3.0

SEO ID NO 100

LENGTH: 869
                                      ð
                                                                밁
                                                                                      õ
Ş
                      밁
                                                                                                                                ş
                                                                                                                                                           문
                                                                                                                                                                                                                                                  ; TYPE: PRT
; ORGANISM: HOMO
US-09-714-008A-100
                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-714-008A-100; Sequence 100, Application
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                             밁
                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                     Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 451; Conservative (
                       181
                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
 241
                                                                  121
                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                              61
                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                        ETSEFLEQQLTSDIIMSDSYLRPAASPRLES 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF 120
QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAM
                                                                                                              AAVMAVIAKTPALRKEVEVEHLCLVDLLAALTLMPLAMLSSSALEDHALFGEVACRLYLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF
                                                                                                                                                                                                                                                            sapiens and
                                                                                                                                                                                                                                                                                                                                                                                                                                              US/09714008A
                                                                                                                                                                                                                                                               Rat
                                                                                                                                                                                                      0
                                                                                                                                                                                                     Score 2318;
Pred. No. 3.1
0; Mismatches
                                                                                                                                                                                                                                                                                                                                consult PALM
                                                                                                                                                                                                                                                                                                                                                                                      Constitutively
                                                                                                                                                                                                                8; DB 21;
3.1e-207;
                                                                                                                                                                                                                                                                                                                               or
                                                                                                                                                                                                                                                                                                                               file wrapper
                                                                                                                                                                                                                                                                                                                                                                                      Activated Human
                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                          Length
                                                                                                                                                                                                      0
                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                      G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                           240
                                                                                        180
                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
 300
                       240
                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                      Protein-Coupled
                                                                                                                                                                                                      0
```

```
Qy
                                         В
                                                          Ωy
                                                                                 В
                                                                                                      δÃ
 B
                                                                                                                            멍
421
                     421
                                          361
                                                                                   301
                                                                                                                            241
                                                              361
                                                                                                       301
                                                                                 ETSEFLEQQLTSDIIMSDSYLRPAASPRLES 451
                                                     KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                             QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                          KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
451
                                                               420
```

Search Job tim

completed: On ne : 116 secs

October

21,

2002,

16:12:45

time

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM protein - protein search, using sw model
       on:
                                                                                                                                                                                                                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
      Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             seq
                                                                                                                                                                                                                                                                                                                                                                                                                      Pending_Patents_AA_New:*

1: /cgn2_6/ptodata/1/paa/U
2: /cgn2_6/ptodata/1/paa/U
3: /cgn2_6/ptodata/1/paa/U
4: /cgn2_6/ptodata/1/paa/U
5: /cgn2_6/ptodata/1/paa/U
6: /cgn2_6/ptodata/1/paa/U
6: /cgn2_6/ptodata/1/paa/U
7: /cgn2_6/ptodata/1/paa/U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length: 0
length: 2000000000
    BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                    Match
                                                                                                                                                                                                                                                                                                                                Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1037649 segs, 282272221 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-838-028-2
2318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   October 21, 2002, 16:09:30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MESSPIPQSSGNSSTLGRVP.....SDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                        /cgn2_6/ptodata/1/paa/PCT_NEW_COMB.pep:*
/cgn2_6/ptodata/1/paa/USO6_NEW_COMB.pep:*
/cgn2_6/ptodata/1/paa/USO7_NEW_COMB.pep:*
/cgn2_6/ptodata/1/paa/USO8_NEW_COMB.pep:*
/cgn2_6/ptodata/1/paa/USO9_NEW_COMB.pep:*
/cgn2_6/ptodata/1/paa/USO9_NEW_COMB.pep:*
/cgn2_6/ptodata/1/paa/USO9_NEW_COMB.pep:*
                                                                                                                                                                                                                                                                                                                     Length
    Gapext 0.5
 PCT-US01-03162-2
US-09-891-138A-12
US-09-891-138A-12
US-10-088-726-18
US-10-079-884-2
US-10-219-834-73
US-10-219-834-74
US-10-219-834-74
US-10-221-279-10303
US-10-125-749-10
US-10-125-749-10
US-10-125-749-10
US-10-125-749-10
US-10-125-749-10
US-10-125-749-10
US-10-125-749-10
US-10-125-987-208
US-60-412-418-208
US-60-412-418-208
US-60-412-418-208
US-10-130-461-12
US-110-130-461-12
US-110-130-461-12
US-10-138-67-2
US-10-238-129-7
US-10-238-129-7
US-10-238-129-8
US-60-412-418-59
US-60-412-418-59
US-60-412-418-59
US-60-412-418-59
US-60-412-418-59
US-60-412-418-59
US-60-412-418-59
US-60-412-418-59
                                                                                                                                                                                                                                                                                                                                                       SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; Search time 46 Seconds
(without alignments)
2767.495 Million cell updates/sec
            Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                         sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
                                                                                                                                                                                                                                                                                                                   Description
                                                                                                                   Sequence
Sequence
2, Appli
12, Appl
18, Appl
2, Appli
2, Appli
73, Appl
10303, Appl
10303, Appl
10, Appli
4, Appli
208, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               451
```

Matches Query Match Best Local

Local Sim. hes 451;

Similarity

100.0%; ilarity 100.0%; Conservative 0;

0;

Score 2318; DB 1; Pred. No. 5.3e-185; Mismatches

Length 451; Indels

0

Gaps

0

60 60

180 240

180

RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAM

QHGPLPTWMETPRQRSESLSSRSTWVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW

300 300 Ş 밁 δÃ Ъ οy Вb ρ В Qy В Q

> 241 181 181

301 LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF

RESULT 1  Sequence 2, Application PC/TUS0103162  Sequence 2, Application PC/TUS0103162  Sequence 2, Application PC/TUS0103162  SEMERAL INFORMATION:  RECULATION:  APPLICATION:  RECEPTOR  FILE OF INVENTION:  RECEPTOR  FILE REFERENCE: 004974.00792  CURRENT APPLICATION NUMBER:  PRIOR APPLICATION NUMBER:  PRIOR PRIOR APPLICATION NUMBER:  PRIOR PRIOR DATE: 2000-03-20  PRIOR APPLICATION NUMBER: 60/210,734  PRIOR FILING DATE: 2000-06-12  PRIOR APPLICATION NUMBER: 60/255,147  PRIOR FILING DATE: 2000-12-14  NUMBER OF SEQ ID NOS: 3  SOFTWARE: PATENTIN Ver. 2.1  SEO ID NO 2  LENGTH: 451  TYPE: PRT  ORGANISM: Homo sapiens	27 310 13.4 28 308 13.3 30 308 13.3 31 308 13.3 31 308 13.3 32 306 13.2 34 306 13.2 35 306 13.2 36 305 13.2 37 305 13.2 38 305 13.2 39 305 13.2 30 305 13.2 31 300 12.9 41 300 12.9 42 300 12.9 43 300 12.9 45 300 12.9
MAN HISTAMINE H2- /03162	515 6 US-10-238-667-9 515 6 US-10-130-461-11 520 6 US-10-138-991-4 520 6 US-10-238-129-4 520 6 US-10-238-67-4 466 1 PCT-US02-25319-26 466 6 US-0-002-945-129 466 6 US-10-215-982-26 497 5 US-09-568-255-2 497 6 US-10-238-129-10 515 6 US-10-238-129-10 515 0 US-10-238-667-10 466 7 US-60-380-336-49 429 5 US-99-919-039-6 466 6 US-10-130-461-10 466 6 US-10-238-129-6 466 6 US-10-238-129-6 466 6 US-10-238-129-6 466 6 US-10-238-129-6 467 US-60-380-336-49 488  US-10-130-461-10 489  US-10-238-129-6 480  US-10-238-129-6 480  US-10-238-129-6
LIKE G PROTEIN-COUPLED	Sequence 9, Appli Sequence 11, Appl Sequence 4, Appli Sequence 4, Appli Sequence 26, Appli Sequence 26, Appli Sequence 26, Appli Sequence 27, Appli Sequence 27, Appli Sequence 27, Appli Sequence 10, Appli Sequence 10, Appli Sequence 49, Appli Sequence 6, Appli

```
APPLICANT: LID, Daniel Chi-Hong
APPLICANT: Zhao, Jiagang
APPLICANT: Chen, Jin-Long
APPLICANT: Chen, Jin-Long
APPLICANT: Chen, Jin-Long
APPLICANT: Tularik Inc.
TITLE OF INVENTION: Novel Receptors
FILE REFERENCE: 018781-006210US
FILE REFERENCE: 018781-006210US
CURRENT APPLICATION NUMBER: US/09/891,138
CURRENT FILING DATE: 2001-06-25
PRIOR APPLICATION NUMBER: US 60/213,461
PRIOR FILING DATE: 2000-06-23
NUMBER OF SEQ ID NOS: 26
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 12
LENGTH: 451
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                    ð
                                                   밁
                                                                           Ş
                                                                                                           В
                                                                                                                                Ş
                                                                                                                                                              밁
                                                                                                                                                                                         õ
                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                   ₽
                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Homo sapiens
FEATURE:
OTHER INFORMATION: human TGR213 G-protein coupled US-09-891-138-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 2
US-09-891-138-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 12, Application US/09891138 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 451; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                   181
421
                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                           121
                                                    361
                                                                                                             301
                                                                                                                                       301
                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                           RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAM
                                                                                                                                                                                                                                                                                            LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                    KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE 420
                                                                                                                                                                 AAVMAVIAKTPALRKEVEVEHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYLE
             ETSEFLEQQLTSDIIMSDSYLRPAASPRLES 451
                                                                                                                                                                                               QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
 ETSEFLEQQLTSDI IMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 2318; DB 5; ilarity 100.0%; Pred. No. 5.3e-185; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            45]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      451
 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     receptor (GPCR)
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
APPLICANT: Lin, Daniel Chi-Hong
APPLICANT: Chen, Jin-Long
APPLICANT: Chen, Jin-Long
APPLICANT: Cutler, Gene
APPLICANT: Tularik Inc.
TITLE OF INVENTION: Novel Receptors
FILE REFERENCE: 018781-006210US
CURRENT APPLICATION NUMBER: US/09/891,138A
CURRENT FILING DATE: 2001-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-891-138A-12; Sequence 12, Ap
                                                                    Ş
                                                                                            DЬ
                                                                                                                δÃ
                                                                                                                                            В
                                                                                                                                                                Ş
                                                                                                                                                                                            В
                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                              δõ
                                                                                                                                                                                                                                                                                                                                       Вþ
                                                                                                                                                                                                                                                                                                                                                            20
                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: human TGR213 G-protein coupled receptor US-09-891-138A-12
RESULT 4
US-10-088-726-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: US 60/213,461
PRIOR FILING DATE: 2000-06-23
NUMBER OF SEQ ID NOS: 26
SOFTWARE: PATENTIN VET. 2.1
SEQ ID NO 12
LENGTH: 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
ORGANISM: Homo :
FEATURE:
                                                                      421
                                                                                                                                                                                            241
                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                               121
                                               421
                                                                                              361
                                                                                                                    361
                                                                                                                                            301
                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                       61 AAVMAVIAKTPALRKEVEVEHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYLE
                                                                                                                                                                                                                                                                                                                                                     61 AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYLF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                  Match 100.0%;
Local Similarity 100.0%;
ses 451; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                    LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                         KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                          LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                            KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/09891138A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 2318;
Pred. No. 5.3
0; Mismatches
                                               451
                                                                      451
                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 5;
5.3e-185;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (GPCR)
                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                     360
                                                                                                                                                                                            300
                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                            360
```

Sequence 18, Application US/10088726
GENERAL INFORMATION:
APPLICANT: MALSUMOTO et al.
APPLICANT: MALSUMOTO et al.
TITLE OF INVENTION: THEREOF, AND PRODUCTION AND USES THEREOF
FILE REFERENCE: 62514
CURRENT APPLICATION NUMBER: US/10/088,726
CURRENT FILING DATE: 2002-03-22

```
; TYPE: PRT
; ORGANISM: Homo
US-10-079-384-2
                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             οy
                                                                                                                                                                                                                              RESULT 5
US-10-079-384-2
                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: HOMO US-10-088-726-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: PCT/JP00/09408
PRIOR FILING DATE: 2000-12-28
PRIOR APPLICATION NUMBER: JP 1999-375152
PRIOR APPLICATION NUMBER: JP 2000-101339
PRIOR APPLICATION NUMBER: JP 2000-101339
PRIOR FILING DATE: 2000-03-31
NUMBER OF SEQ ID NOS: 63
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 18
LENGTH: 451
                                                                                        NUMBER OF SEQ ID NOS: 50
SOFTWARE: PatentIn version 3.1
SEQ ID NO 2
                                                                                                                                                                                                    Sequence 2, Application:
  Query Match
Best Local Similarity
Matches 451; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                       CURRENT FILING DATE: 2002-02-20
PRIOR APPLICATION NUMBER: US 09/885,453
PRIOR FILING DATE: 2001-06-20
                                                                                                                                               CURRENT APPLICATION NUMBER: US/10/079,384
CURRENT FILING DATE: 2002-02-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                    APPLICANT: Communi, Didier
TITLE OF INVENTION: COMPOSITIONS AND METHODS COMPRISING G-PROTEIN COUPLED RECEPTORS
FILE REFERENCE: 9409/2132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
                                                                               LENGTH: 451
                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _
                                                                                                                                                                                                                                                                                                                                                               QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ETSEFLEQQLTSDIIMSDSYLRPAASPRLES 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAVMAVIAKTPALRKEVEVEHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYLE 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
                                                                                                                                                                                                                                                                         ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                               KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       451;
                                                                                                                                                                                                                                                                                                                      KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                   Application US/10079384
 100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 2318;
Pred. No. 5.3
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1999-375152
 Score 2318; DB Pred. No. 5.3e-1; Mismatches
                                                                                                                                                                                                                                                                         451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5.3e-185;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
            6;
185;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6;
                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
  Indels
                        451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                               ; LENGTH: 451
; TYPE: PRT
; ORGANISM: Homo ;
US-10-221-160-2
                                            Дb
                                                                Ş
                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QY
                  δÃ
                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-221-160-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                   Query Match
Best Local Similarity
Matches 451; Conserv
                                                                                                                                                                                                                           SOFTWARE: PatentIn SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                              Sequence 2, Applicat GENERAL INFORMATION:
  121
                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                  1 MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            _
\tt MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
```

```
ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                    RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILIVYYCSMERVARVAAM
                                                                                                                                                                                                                                                                                                 LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                                                                                                                            AAVMAVIAKTPALRKEVEVEHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF
                                                                                                                                                                                                                                                                                                                                                         AAVMAVIAKTPALRKEVEVEHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF 120
                                                                                                                                                                                                                                                                                                                                                                                                                  MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                     MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
                                                                                                                                                                                                                                                                                     LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
451
                         451
                                                                                 420
                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                180
                                                       420
                                                                                                              360
                                                                                                                                                                     300
                                                                                                                                                                                                300
                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                     60
```

PRIOR APPLICATION NUMBER: US 60/190,194
PRIOR FILING DATE: 2000-03-20
PRIOR APPLICATION NUMBER: US 60/210,975
PRIOR FILING DATE: 2000-06-12
PRIOR APPLICATION NUMBER: US 60/255,110 TITLE OF INVENTION: REGULATION OF HUMAN SEROTONIN-LIKE TITLE OF INVENTION: RECEPTOR FILE REFERENCE: 004974.00791 CURRENT APPLICATION NUMBER: US/10/221,160 CURRENT FILING DATE: 2002-09-18 PRIOR FILING DATE: 2000-12-14 NUMBER OF SEQ ID NOS: 3 APPLICANT: Shyman Ramakrishnan Application US/10221160 100.0%; ilarity 100.0%; Conservative ( sapiens Ver. 2.1 0; Score 2318; DB 6; Pred. No. 5.3e-185; Mismatches 0; Indels Length G 451; 0;

Gaps

0

60

180

180

```
CURRENT APPLICATION NUMBER: US/10/219,834
CURRENT FILING DATE: 2002-08-15
PRIOR APPLICATION NUMBER: US 60/313,658
PRIOR FILING DATE: 2001-08-20
PRIOR FILING DATE: 2001-10-30
PRIOR APPLICATION NUMBER: US 60/340,703
PRIOR APPLICATION NUMBER: US 60/340,675
PRIOR APPLICATION NUMBER: US 60/318,675
PRIOR FILING DATE: 2001-09-12
PRIOR FILING DATE: 2001-09-12
PRIOR FILING DATE: 2002-02-06
PRIOR FILING DATE: 2002-01-06
PRIOR APPLICATION NUMBER: US 60/333,417
PRIOR APPLICATION NUMBER: US 60/333,417
PRIOR APPLICATION NUMBER: US 60/338,367
PRIOR FILING DATE: 2001-11-26
PRIOR FILING DATE: 2001-11-206
PRIOR FILING DATE: 2001-11-206
PRIOR FILING DATE: 2001-11-206
                                                                           S
                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                 ; TYPE: PRT
; ORGANISM: Homo
US-10-219-834-73
                    S
                                                 밁
                                                                                                          밁
                                                                                                                                      Š
                                                                                                                                                                   망
                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 7
US-10-219-834-73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 73, Application US/10219834 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 73
                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Bristol-Myers Squibb Company
TITLE OF INVENTION: G-PROTEIN COUPLED RECEPTOR POLYNUCLEOTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 2001-1: NUMBER OF SEQ ID NOS: 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILE REFERENCE: D0191 NP
                                                                                                                                                                                                                                                                                                                                                                                              LENGTH:
                                                   181
                                                                              181
                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                       61
                                                                                                                                                                                                  61
                                                                                                                                                                                                                                              MESSPIPOSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVEAVLYFLLPLLLILVVYCSMFRVARVAAM 240
                                                                                                                          LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                     AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                                                                                MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ETSEFLEQQLTSDIIMSDSYLRPAASPRLES 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ETSEFLEQQLTSDIIMSDSYLRPAASPRLES 451
                                                                                                            LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                     AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSPALFDHALFGEVACRLYLF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAM
                                                 RVSWEEGAPSVPPHCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILLVYCSMFRVARVAAM
    PatentIn
                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                           version
                                                                                                                                                                                                                                                                                                     90.9%;
                                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                                                        Score 2106; DB 6;
Pred. No. 2.4e-167;
1; Mismatches 4;
                                                                                                                                                                                                                                                                                                                     Length 417;
                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AND
                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 င္အ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H
RESULT 9
US-10-21-279-10303
Sequence 10303, Application US/10221279
GENERAL INFORMATION:
APPLICANT: Hyseq, Inc
TITLE OF INVENTION: NOVel Nucleic Acids and FILE REFERENCE: 21272-046
CURRENT APPLICATION NUMBER: US/10/221,279
                                                                                                                                                                                 ğ
                                                                                                                                                                                                               В
                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                          Вþ
                                                                                                                                                                                                                                                                                                    200
                                                                                                                                                                                                                                                                                                                                   Db
                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   믕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-219-834-74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 74
LENGTH: 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
                                                                                                                                                                                   325
                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                       241
                                                                                                                                                                                                                                            265
                                                                                                                                                                                                                                                                                                       205
                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                        85
                                                                                                                                                                                                                                                                                                                                                                                            Н
```

```
; ORGANISM: Homo sapiens US-10-219-834-74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: US 60/340,703
PRIOR FILING DATE: 2001-10-30
PRIOR PPLICATION NUMBER: US 60/318,675
PRIOR FILING DATE: 2001-09-12
PRIOR APPLICATION NUMBER: US 60/355,596
PRIOR FILING DATE: 2002-02-06
PRIOR APPLICATION NUMBER: US 60/333,417
PRIOR APPLICATION NUMBER: US 60/333,417
PRIOR PILING DATE: 2001-11-26
PRIOR APPLICATION NUMBER: US 60/338,367
PRIOR FILING DATE: 2001-12-06
NUMBER OF SEQ ID NOS: 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 74, Applica GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: G-PROTEIN COUPLED RECEPTOR FILE REFERENCE: D0191 NP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: US 60/313,658 PRIOR FILING DATE: 2001-08-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/10/219,834 CURRENT FILING DATE: 2002-08-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                    VVTWIGYFCFTS
                                                                                                MVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVES
                                                                                                                                                         CQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRST
                                                                                                                                                                                CQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRST
                                                                                                                                                                                                                                         VHPMRYEVRMKLGLVASVLVGVWVKALAMASVPVLGRVSWEEGPPSVPPGCSLQWSHSAY
                                                                                                                                                                                                                                                            VHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLGRVSWEEGAPSVPPGCSLQNSHSAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LPYFSFHLYVALSAQPISTGQVESVYTWIGXFCFTSNPFFYGCLNRQIRGELSKQFVCFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PDGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
VVTWIGYFCFTS
                                                                             MVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPIAAGQVEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF 360
                                                                                                                                                                                                                                                                                                                                                                                                    al Similarity
247; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PatentIn version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application
                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                       336
                                                                                                                                                                                                                                                                                                                                                                                                                         55.0%;
98.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/10219834
                                                                                                                                                                                                                                                                                                                                                                                                    Score 1276; DB 6;
Pred. No. 2.4e-98;
2; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POLYNUCLEOTIDES AND
                                                                                                                                                                                                                                                                                                                                                                                                      ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 252;
                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   METHODS
                                                                                                                   324
                                                                                                                                                           180
                                                                                                                                                                                                                                         120
                                                                                                                                                                                                   264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ç
```

USE

and

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-125-749-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; ORGANISM: Homo sapiens 
US-10-221-279-10303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 10, Application US/10125749 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 12360
SOFTWARE: Custom
SEQ ID NO 10303
LENGTH: 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT FILING DATE: 2002-09-06
PRIOR APPLICATION NUMBER: 09/574,454
PRIOR FILING DATE: 2000-05-19
TITLE OF INVENTION: HUMAN G PROTEIN-COUPLED RECEPTOR TITLE OF INVENTION: POLYPEPTIDES AND POLYNUCLEOTIDES
                                                                                                                     APPLICANT:
                                                                                                                                                APPLICANT:
                                                                                                                                                                APPLICANT
                                                                                                                                                                              APPLICANT
                                                                                                                                                                                                                                        APPLICANT
                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                    APPLICANT
                                                                                                                                                                                                                                                                                  APPLICANT
                                                                                                                                                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                                                                                                                                              APPLICANT
                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 14
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 09/519,705 PRIOR FILING DATE: 2000-03-07
                              APPLICANT:
                                                                                                                                                                                                           APPLICANT
                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                            APPLICANT
                                                                                                                                                                                                                                                                                                                                                          APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    y Match 29.2%;
Local Similarity 95.5%;
hes 126; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DVIITNSYLSPA 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DIIMSDSYLRPA 444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAEETSEFLEQQLTS 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAEETSEFLEQHLTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Erding Hu
                                      Philippe Laurent Robert
Stephane Clement Krief
Bernard Emile Joseph Gout
                                                                                                                                                                                                                                                                                                Ping
                                                                                    George H. Poste
Michel Louis Souchet
                                                                                                                                                                                           John W. Quillen, Jr. Erin M. Toland
                                                                                                                                                                                                                                                                                                                                                                                                    Derk J. Bergsma
Nabil A. Elshourbagy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jon Chambers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wendy S. Halsey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Joyce Yue Mao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ganesh
                              Eve Mahe
                                                                                                                   Steven Ruben
                                                                                                                                                                              Steven Michael Foord
                                                                                                                                                                                                                       Manhanandeeshwar
                                                                                                                                                                                                                                       Catherine E. Ellis
                                                                                                                                                                                                                                                                                                             Jeffrey Hill
                                                                                                                                                                                                                                                                                                                           David Malcolm Duckworth .
                                                                                                                                                                                                                                                                                                                                           Melanie Robbins
                                                                                                                                                                                                                                                                                                                                                         Menelas N.
                                                                                                                                                                                                                                                                                                                                                                       Pamela A. Lane
                                                                                                                                                                                                                                                                                                                                                                                    David Michalovich
                                                                                                                                                                                                                                                                                                                                                                                                                                               Philip Graham Szekeres
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alison Isobel Muir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yuan Zhu
                                                                                                                                  Henry Sarau
                                                                                                                                               Alexander Taylor
                                                                                                                                                             Han Ngoc Trinh
                                                                                                                                                                                                                                                                 Randall Forrest Smith
                                                                                                                                                                                                                                                                                Pankaj Agarwal
                                                                                                                                                                                                                                                    Lisa Vawter
                                                                                                                                                                                                                                                                                              Tsui
                                                                                                                                                                                                                                                                                                                                                                                                                                 Shabon
                                                                                                                                                                                                                                                                                                                                                         Pangalos
                                                                                                                                                                                                                       Gattu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 677; DB 6; Pred. No. 1.2e-48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
 POLYNUCLEOTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 143;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; ORGANISM: HOMO SAPIENS US-10-125-749-10
                                                                                      ; ORGANISM: Homo US-10-070-334-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-070-334-1
                                                                                                                                                                                                                                                                                                                                                Sequence 1, Application US/10070334

GENERAL INFORMATION:
APPLICANT: WATANABE, TAKUYA
APPLICANT: KIKUCHI, KUNIKO
APPLICANT: SHINTANI, YASUSHI
TITLE OF INVENTION: NOVEL G PROTEIN-COUPLED RECEPTOR PROTEIN AND DNA
TITLE OF INVENTION: THEREOF
Query Match
Best Local Similarity
Matches 127; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 10
LENGTH: 368
                                                                                                                                                                 SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                           FILE REFERENCE: 57126(46342)
CURRENT APPLICATION NUMBER: US/10/070,334
CURRENT FILING DATE: 2002-07-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: US/09/988,922
PRIOR FILING DATE: 2001-11-19
NUMBER OF SEQ ID NOS: 82
SOFTWARE: FASTSEQ for Windows Version 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/10/125,749
CURRENT FILING DATE: 2002-04-18
                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: JP 11-241529 PRIOR FILING DATE: 1999-08-27 NUMBER OF SEQ ID NOS: 7
                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: PCT/JP00/05683 PRIOR FILING DATE: 2000-08-08
                                                                                                                         LENGTH: 36
TYPE: PRT
                                                                                                                                                                              SOFTWARE: PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  315 ---ACTPQAWHPRALLQCLQRPPEGPAVGPSEAPEQTPE 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          156 LGLVASVLVGVWVKALAMASVPVLGRVSWEEGAPSVPPGCSLQWSHSAYCQL-----F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97 AMLSSSAL-FDHALFGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMT 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40 ASE---SVALFFMLLLDLTAVAGNAAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPL 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAEETSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ---PPLRPR---LPGGKAALAPALAVGQFAACWLPY-----GCACLAPAARAAEAEAAVTW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VVVFAVLYELLPLLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PVL---VLTAVWAAAGLLGALSLL------GPPPAPPPA-----PARCSVLAGGLGPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLLAAPPPGLGRVRLGPAPCRAARFLSAALLPACTLGVAALGLARYRLIVHPLRPGSRPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VAYSAFAAHPFLYGLLQRPVRLALGRLSRRAL----PGPVR--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IGYFCFTSNPFFYGCLNRQIR----GELSKQFVCFFKPAPEEELRLPSREGSIEENFLQFL
: | | ::|| || | :| | || || :| :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ASEVAGSLGLILAAVVEVGALLGNGALLVVVLRTPGLRDALYLAHLCVVDLLAAASIMPL
                                                                                                                                             368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                        sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 438.5; DB 6
Pred. No. 2.9e-28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches 146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 368;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14;
```

Conservative

18.9%;

Score 438.5; Pred. No. 2.9

.9e-28;

DB 6;

Length 368;

Mismatches

Indels

71;

Gaps

14;

```
ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                      : NUMBER OF SEQ ID NOS: 42
: SOFTWARE: PERL Program
: SEQ ID NO 4
: LENGTH: 368
TYPE: PRT
                                                                    Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 4, Application US/10220382 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                      APPLICANT: WALSH, RODETICK T.
APPLICANT: LO, Terence P.
APPLICANT: BOROWSKY, Mark L.
APPLICANT: BOROWSKY, Mark L.
TITLE OF INVENTION: G-PROTEIN COUPLED RECEPTORS
FILE REFERENCE: PI-0044 PCT
CURRENT APPLICATION NUMBER: US/10/220,382
CURRENT FILING DATE: 2001-03-01
PRIOR APPLICATION NUMBER: 60/186,854; 60/188,384; 60/190,453; 60/190,730
PRIOR FILING DATE: 2000-03-03; 2000-03-10; 2000-03-17; 2000-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: INCYTE GENOMICS, INC. APPLICANT: LAL, Preeti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                     ORGANISM: Homo sapiens
FEATURE:
NAME/KBY: misc_feature
OTHER INFORMATION: Incyte ID No: 2289894CD1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           209
                                           Local Similarity 31.8%;
les 127; Conservation
                   6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40
ASE---SVALFFMLLLDLTAVAGNAAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPL 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VAYSAFAAHPELYGLLQRPVRLALGRLSRRAL----PGPVR---------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ---ACTPQAWHPRALLQCLQRPPEGPAVGPSEAPEQTPE 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAEETSE 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ---PPLRPR--LPGGKAALAPALAVGQFAACWLPY----GCACLAPAARAAEAEAAVTW 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTW 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PVL---VLTAVWAAAGLLGALSLL-----GPPPAPPPA-----PARCSVLAGGLGPF 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LGLVASVLVGVWVKALAMASVPVLGRVSWEEGAPSVPPGCSLQWSHSAYCQL-----F 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GLLAAPPPGLGRVRLGPAPCRAARFLSAALLPACTLGVAALGLARYRLIVHPLRPGSRPP 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IGYFCFTSNPFFYGCLNRQIR---GELSKQFVCFFKPAPEEELRLPSREGSIEENFLQFL 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RPLWALLAFALPALLLLGAYGGIFVVARRAALR-PPRPA--RGSRLRSDSLDSRLSIL--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AMLSSSAL-FDHALFGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMT 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YAO, Monique G.
SHIH, Leo L.
TRIBOULEY, Catherine
LU, Dyung Aina M.
                                                                                                                                                                                                                                                                                                                                                                                                                                               HARLAND,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AU-YOUNG, Janice
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PATTERSON, Chandra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POLICKY, Jennifer L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KHAN, Farrah A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Junming
                                                    55;
                                                 Score 438.5; DB 6;
Pred. NO. 2.9e-28;
5; Mismatches 146;
                                                                                  Length 368;
                                                  Indels 71;
                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        227
                 Š
281 GGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFF 340
```

	LLLILVYYCSMERVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTF 280	Qy 221 Db 192	п О
	VGVWVKALAMASVPV-LGRVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLP 220   :  :  :  :  :  :  :  :  :  :  :  :  :	Qy 164 Db 137	п О
	HALFGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVL 163	Qy 107 Db 77	п с
	MLLLDLTAVAGNAAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFD 106 : :	Qy 49 Db 22	п о
10	y Match 15.0%; Score 347; DB 7; Length 348; Local Similarity 28.6%; Pred. No. 1.2e-20; hes 99; Conservative 57; Mismatches 132; Indels 58; Gaps	Query Ma Best Loo Matches	
	PRT FRT ISM: Homo sapiens -987-208	; TYPE: PRT; ORGANISM: US-60-389-987-	C
	R OF SEQ ID NOS: 3025 ARE: FastSEQ for Windows Version 4.0 NO 208 TH- 348	NUMBER OF SOFTWARE: SEQ ID NO	
	r APPLICATION NUMBER: US/60/389,987 r APPLICATION NUMBER: US/60/389,987 r FILING DATE: 2002-06-17		
	NVENTION: TARGET NVENTION: IDENT NVENTION: A65	TITLE	
		APPLICANT: APPLICANT:	
	Zhang, E Gibson,	APPLICANT: APPLICANT:	*. *.
	ANT: Ghosh, Soumitra S. ANT: Fahy, Eoin D.	APPLICANT:	~. ~.
	ŌΦ:	RESULT 13 US-60-389 ; Sequenc ; GENERAL	, .
	WHPRALLQCLQRPPEGPAVGPSEAP	Db 315	п
	QGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAEETSE 424	у 386	Qy
	VAYSAFAAHPELYGLLQRPVRLALGRLSRRALPGPVR	Db 278	
	IGYFCFTSNPFFYGCLNROIRGELSKQFVCFFKPAPEEELRLPSREGSIEENFLOFL 385	у 329	уо
	PPLRPRLPGGKAALAPALAVGQFAACWLPYGCACLAPAARAAEAEAAVTW 277	Db 228	1
	HLYVALSAQPISTGQVESV	у 269	ОУ
	VI V F L L T L V L V Y C S M F R V A R V A A MOHG D L D T W M F T D R O R S E S L S S R S T M V T S		0 !
	LGLVASVLVGVWVKALAMASVPVLGRVSWEEGAPSVPPGCSLQWSHSAYCQL	Qу 156 Db 129	Qy Db
	GLEAAPPPGLGRVRLGPAPCRAARFLSAALLPACTLGVAALGLARYRLIVHPLRPGSRPP 128	Db 69	
	AMLSSSAL-FDHALFGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMT 155	Оу 97	0
	ASEVAGSLGLILAAVVEVGALLGNGALLVVVLRTPGLRDALYLAHLCVVDLLAAASIMPL 68	ממ	

```
US-09-546-038A-31

Sequence 31, Application US/09546038A

GENERAL INFORMATION:

APPLICANT: Gould-Rothberg, Bonnie

TITLE OF INVENTION: METHOD OF IDENTIFYING LIGANDS FOR THE PEROXISOME

TITLE OF INVENTION: PROLIFERATOR ACTIVATED RECEPTOR GAMMA USING

TITLE OF INVENTION: DIFFERENTIAL GENE EXPRESSION

FILE REFERENCE: 15966-549 METHOD OF IDENTIFYING LIGAND

CURRENT APPLICATION NUMBER: US/09/546,038A

CURRENT FILING DATE: 2000-04-10

PRIOR APPLICATION NUMBER: USSN 60/130,821

PRIOR FILING DATE: 1999-04-23
                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                   ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 348
; TYPE: PRT
; ORGANISM: Homo sapiens
US-60-412-418-208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-60-412-418-208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 208, Application US/60412418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Taylor, Steven W.
APPLICANT: Glenn, Gary M.
APPLICANT: Warnock, Dale E.
TITLE OF INVENTION: TARGETS FOR THERAPEUTIC INTERVENTION
TITLE OF INVENTION: IDENTIFIED IN THE MITOCHONDRIAL PROTEOME
FILE REFERENCE: 660088.465P3
CURRENT FILING DATE: 2002-09-20
NUMBER OF SEQ ID NOS: 3025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Ghosh, Soumitry
APPLICANT: Fahy, Eoin D.
APPLICANT: Zhang, Bing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         107
                                                                                                                                                                                                                                                                                                                                               285
                                                                                                                                                                                                                                                                                                                                                                                           341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              164 VGVWVKALAMASVPV-LGRVSWEEGAPS--VPPGCSLQWSHSAYCQLFVVVFAVLYFILP 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22 LAVLILITVAGNVVVCLAVGLNRRLRNLTNCFIVSLAITDLLLGLLVLPF-----SAIYQ 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MLLLDLTAVAGNAAVMAVIAKTPALRKEV--EVEHLCLVDLLAALTLMPLAMLSSSALED 106
                                                                                                                                                                                                                                                                                                                                               YAALNRDFRTGYQQLFCC------RLANRNSHKTSLRSNASQ 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTF 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVL 163
                                                                                                                                                                                                                                                                                                                                                                                       YGCLNRQIRGELSKQFVCFFKPAPEEELRLPSREG---SIEENFLQ 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFF 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VLIWVISITLSFLSIHLGWNSRNETSKGNHTTSKCNVQVN-----EVYGLVDGLVTFYLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LSCKWSFGKVFCNIYTSLDVMLCTASILNLFMISLDRYCAVMDPLRYPVLVTPARVAISL 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YAALNRDFRTGYQQLFCC------RLANRNSHKTSLRSNASQ 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LLIMCITYYRIFRVARDQAKRIDHISSWK-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YGCLNRQIRGELSKQFVCFFKPAPEEELRLPSREG---SIEENFLQ 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----ATVTLAAVMGAFIICWFPYFTAFVYRGLRGDDAINEMLEAIVLWLGYANSALNPIL 284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zhang, Bing
Gibson, Bradford W.
Taylor, Steven W.
Glenn, Gary M.
                                                                                                                                                                                                                                                                                                                                                                                                                                 -ATVTLAAVMGAFIICWFPYFTAFVYRGLRGDDAINEMLEAIVLMLGYANSALNPIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Soumitra S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15.0%; Score 347; DB 7; Length 34 28.6%; Pred. No. 1.2e-20; tive 57; Mismatches 132; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 348;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ---AATIREHR--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10;
```

Search completed: Job time : 47 secs

October

21,

2002, 16:13:37

```
Ş
                                                                       B
                                                                                                        δÃ
                                                                                                                                             B
                                                                                                                                                                              δÃ
                                                                                                                                                                                                                    Вþ
                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                              Ъ
                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                       DЪ
                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                               DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-546-038A-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 28.2 Matches 120; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Patentin SEQ ID NO 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 400
TYPE: PRT
                                                                                                                                                                                                                                                                                            173 Q-WWRVGADAEAQECH---SNPRCCSFASNMPYALLSSSVSFYLPLLVMLFVYARVFVVA
                                    398
                                                                       347
                                                                                                            346
                                                                                                                                               288
                                                                                                                                                                                                                                                     236 ----RVAAMOHGPLPTWMETPR--ORSESLSSRSTMVTSSGAPQ--TTPHR--TFGGGKA 285
                                                                                                                                                                                                                                                                                                                                                                       113
                                                                                                                                                                                 286
                                                                                                                                                                                                                    229 KRORRLLRRELGREPP-EESPRSPSRSPSPATVGTPTASDGVPSCGRRPARLLPLGEHRA
                                                                                                                                                                                                                                                                                                                             181 RVSWEEGAPSVPPGCSLQWSHSAYCQL-----FVVVFAVLYFLLPLLLILVVYCSMFRVA 235
                                                                                                                                                                                                                                                                                                                                                                                           121 LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63 VMAVIAKTPALRKF--VFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 SPIPQSSGNSSTLGRVPQ-TPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGNAA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 APWPHKNGSLAFWSDAPTLDPSAANTSGLPGV-----PWAAALAGALLALATVGGNLL 54
                                                                                                                                             LRTLGLIMGIESLCWLPFELANVLRALVGPSLVPSGVFIALNWLGYANSAENPLIY-CRS
RPFPT
                                  RPLPS 402
                                                                                                        RQIRGELSKQFVCFFKPAPEEELR-----LPSREGSIEENFLQFLQGTGCPSESWVS
                                                                                                                                                                                AVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLN 345
                                                                                                                                                                                                                                                                                                                                                                   VDVLCVTASIETLCALAVDRYLAVTNPLRYGTLVTKRRARAAVVLVWIVSATVSFAPIMS 172
                                                                       PDFR-DAFRRLLCSYGGRGPEEPRVVTFPASPVASRQNSPLNRF-----DGYEGE----
                                                                                                                                                                                                                                                                                                                                                                                                                                             VITAIARTPRLQTITNVFVTSLATADLVVGLLVMPPG--ATLALTGHWPLGATGCELWTS 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; Score 337; DB 5; ; Pred. No. 9.5e-20; 65; Mismatches 188;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                            228
                                                                                                                                             346
                                                                                                                                                                                                                      287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17;
```

THIS PAGE BLANK (USPTO)

```
Minimum DB
Maximum DB
                                                                                                                                                                                                                    Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                              Pred. No.
                                                                                                                                                                                                                Score
 is derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  seq
                                                                                                                                                                                                                                                                                                                         greater
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-838-028-2
2318
100.0
100.0
100.0
100.0
100.0
100.0
99.8
63.5
55.0
29.9
                                                                                                                                                                                                                Match
                                                                                                                                                                                                                                                                                                                         is the number of results predicted by chance to have iter than or equal to the score of the result being p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          October 21, 2002, 16:08:10 ; Search time 34 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            747574 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A_Geneseq_032802:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Maximum Match
                                                                                                                                                                                                                                                                                                                                                                      // SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1991.DAT: *
// SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1992.DAT: *
// SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1993.DAT: *
// SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1994.DAT: *
// SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1995.DAT: *
// SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1995.DAT: *
// SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT: *
// SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT: *
// SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT: *
// SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT: *
// SIDS1/gcgdata/geneseq/geneseqp-emb1/AA20000.DAT: *
// SIDS1/gcgdata/geneseq/geneseqp-emb1/AA20001.DAT: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MESSPIPQSSGNSSTLGRVP...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1985.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1985.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1987.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1988.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1989.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1989.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1980.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1981.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1981.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1983.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1984.DAT:*
                                                                                                                                                                                                                                                                                                        ρĄ
                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                        analysis of the total
451
451
451
451
451
451
252
252
252
252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenCore version (c) 1993 - 2002
                                                                                                                                                                                                                    DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              111073796 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100%
                                                                                                                                                                                                                  IJ
                  AAE12024
AAU07900
AAU04367
AAG64123
AAG64123
AAU04386
AAU04386
AAU04385
AAU06595
AAR91232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (without 1473.361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5.1.3
Compugen
                                                                                                                                                                                                                                                                                                        score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   alignments)
Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ltd.
         Human G-protein co
Human serotonin-li
Human histamine H2
Human G-protein co
Human G-protein co
GPCR-GS fusion pro
Human G-protein co
Human G-protein co
Human G-protein co
G protein conjugat
Rabbit G-protein
                                                                                                                                                                                                               Description
                                                                                                                                                                                                                                                                                                                   being
                                                                                                                                                                                                                                                                                                                       printed,
```

Corn barnacle G-pr	AAW33185	18	379	13.7	317.5	U
Human beta-3 adren	AAR54991	15	408		319.5	
Human adrenaline b	AAW53847	19	407	•	319.5	ω
	AAR06495	11	402	•	319.5	2
Hu	AAY57168	21	501		320	_
Human alpha-1A adr	AAR70996	15	501		320	O
$\vdash$	AAR90040	16	501	•	322	Ψ
Rat alpha-la adren	AAB59666	22	560	•	322.5	ω
	AAB59665	22	501	14.0	325	7
Murine beta-3 adre	AAR54992	15	400	•	326.5	Oi
_	AAR25698	13	388		326.5	Ui
Sequence of human	AAR52830	15	572		329.5	
ren	AAR98563	17	572		330	ω
m.	AAR36801	14	437	•	331.5	2
	AAB59662	22	57.2		332.5	_
-1A adren	AAR85945	16	572		332.5	O
Human alpha-1A	AAR90039	16	572		332.5	Ψ
	AAR58681	15	572		332.5	æ
	AAR53071	15	572		332.5	7
	AAU05409	22	565	14.4	333	01
Bovine beta3 adren	AAR62515	15	405	•	335.5	01
Beta-adrenergic re	AAR32501	14	400	•	340	-
ce of HuH2	AAY57172	21	359	14.7	340	ω
istamine H	AAY00889	20	359		340	N
e histamine	AAY00890	20	359		346	_
n sequence	AAW31712	18	348	•	347	0
Human histamine H2	AAW00551	17	348	٠	347	6
ndogenous hu	ABB56328	22	440	•	349.5	œ
	AAB70142	22	368	•	438.5	7
Human GTP-binding	AAG64288	22	368	•	438.5	on
tein couple	AAU10303	22	368	•	438.5	G
G proteir	AAB02827	21	368	•	438.5	
	2	21	368	18.9	438.5	ω
G protein coupled	AAB19523	21	368		438.5	N

# ALIGNMENTS

AAE12024;

(first entry)

AAE12024 standard;

Protein; 451

Ş

RESULT 1
AABE12024
ID AABE1
XX AABE1
XX AABE1
XX AABE1
XX Huma
DE Huma
XX Huma
CH Huma gastrointestinal disorder; gastritis; nausea; autoimmune; anaemi inflammatory disorder; acquired immunodeficiency syndrome; AIDS; metabolic disorder; diabetes; obesity; viral infection; drug scr Human; G-protein coupled receptor; GCREC; gene therapy; proteosome analysis; cell proliferative disorder; arteriosclerosis; cancer; neurological disorder; athuntington's disease; parkinson's disease; cardiovascular disorder; atherosclerosis; congestive heart failure; gastrointestinal disorder; gastritis; nausea; autoimmune; anaemia; WO200172836-A2 Domain Homo sapiens. virucide. chromosomal Human G-protein coupled receptor, GCREC-3. Domain Domain mapping; cytostatic; immunomodulatory; antiinflammatory; /label= Transmembrane\_domain 288..306 Location/Qualifiers /label= Transmembrane\_domain Transmembrane\_domain drug screening;

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                      ₽
                                                                                                                                                                                                                                                                                                                                                              ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CC Identifying specific agonists and antagonists, also binding agents can almost be used for generating specific antibodies and modulators. They can also be used for generating specific antibodies can derived professome analysis. Disorders that can be treated include conversional disorders, e.g., arteriosclerosis and cancer, conversional disorders, e.g., arteriosclerosis and cancer, conversional disorders, e.g., arteriosclerosis and congestive heart failure, gastrointestinal disorders, e.g., gastritts and nausea, cardiomanne/inflammatory disorders, e.g., acquired immunodefictency conversione (AIDS) and anaemia, metabolic disorders, e.g., diabetes and cobesity and viral infections. Nucleic acids that encode GCREC are converted for identifying agents that alter its expression, for assessing convictity of test compounds and as sources of primers and probes for convictity of test compounds and so be used in gene therapy, for convictity of test compounds and so be used in gene therapy. For the converse sequences. They can also be used in gene therapy. For antibodies are useful for diagnosis and monitoring of diseases and cancer therapy. The converse of 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ouery Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-MAR-2000;
06-APR-2000;
20-APR-2000;
28-APR-2000;
05-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present sequence is a human G-protein coupled receptor, GCREC-3 protein. The GCRECs are used for treating or preventing disorders associated with decreased expression of functional GCREC, and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; Page 104-105; lllpp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           modulators, and related nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                diagnosis of e.g. cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-616472/71.
N-PSDB; AAD19579.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nguyen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-MAR-2001;
       301
                                                   241
                                                                                                                                         181
                                                                                             241
                                                                                                                                                                                      181
                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                      _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 as therapeutic agents and
                                            QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTEGGGKAAVVLLAVGGQFLLCW
                                                                                                                                  RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLLILVVYCSMFRVARVAAM
                                                                                                                                                                                                                                                                                                                                                                                                                                    MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN 60
LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF
                                                                                                                                                                                                                                                                          LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                                                                                                    AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF
                                                                                                                                                                                                                                                                                                                                                                                                          MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
                                                                                                                                                                                                                                LSVCFVSLATLSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INCYTE GENOMICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                G-protein coupled receptors, useful for treatment and of e.g. cell proliferation, also screening for specif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           451 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000US-193051P.
2000US-195155P.
2000US-199084P.
2000US-200551P.
2000US-202278P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patterson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tribouley CM,
Patterson C, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001WO-US10436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tang YT,
al P, Au-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 2318; DB 22
Pred. No. 2e-228;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 for drug screening.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Au-young
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                also screening
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Baughn MR, Graui
young J, Yang J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Graul R, Khan FA;
ng J, Hafalia A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                for specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                       240
                                                                                                                                                                                 240
                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                      120
                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

Ş

õ

В

ş

```
RESULT 2
AAU07900
      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Db
                                                                                                                                    The present invention relates to the isolation of a novel DNA sequence encoding a human serotonin-like G protein-coupled receptor (5-HT-GPCR) polypeptide. The sequences of the invention are useful for screening for agents which decrease the activity of 5-HT-GPCR or for identifying agents which regulate the activity of 5-HT-GPCR a reagent that modulates the activity of 5-HT-GPCR in useful for detecting 5-HT-GPCR in a biological sample and for reducing the activity of 5-HT-GPCR in a cell. A pharmaceutical composition comprising such a reagent is useful for preventing or ameliorating disorders of the peripheral or central nervous system, preferably primary or secondary disorders after brain injury, mood disorders, anxiety disorders, disorders of thought and volition, sleep disorders, neurodegenerative disorders (e.g. Alzheimer's disease, Parkinson's disease) or disorders leading to peripheral and chronic main, who coding accuracy of the purpose to peripheral and chronic main, who coding accuracy of the peripheral and chronic main, who coding accuracy of the peripheral and chronic main, who coding accuracy of the peripheral and chronic main, who coding accuracy of the peripheral and chronic main, who coding accuracy of the peripheral and chronic main, who coding accuracy of the peripheral and chronic main, who coding accuracy of the peripheral and chronic main, who coding accuracy of the peripheral and chronic main, who coding accuracy of the peripheral and chronic main who coding accuracy of the peripheral and chronic main who coding accuracy of the peripheral and chronic main who coding accuracy of the peripheral and chronic main who coding accuracy of the peripheral and chronic main the peripheral 
chronic pain. The coding sequence of 5-HT-GPCR polynucleotide is use for generating antisense oligonucleotides or ribozymes which specificated to mRNA transcribed from the 5-HT-GPCR polynucleotide. These antisense oligonucleotides are useful for modulating 5-HT-GPCR gene expression. Polynucleotide sequences encoding for 5-HT-GPCR may be useful for sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New polynucleotide encoding a polypeptide which regulates, prevents treats diseases of the peripheral or central nervous system includin Alzheimer's Disease, comprises the human serotonin-like G protein-coupled receptor polynucleotide .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; Fig 2; 88pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-MAR-2000; 2000US-190104P
12-JUN-2000; 2000US-210975P
14-DEC-2000; 2000US-255110P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             analgesic; cerebroprotective.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     peripheral nervous system; central nervous system; PNS; CNS; brain injury; mood disorder; anxiety disorder; sleep disorder; neurogenic; myopathic disorder; neurodegenerative disorder; tranquillizer; nootropic; neuroprotective; antiparkinsonian;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAU07900 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ramakrishnan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (FARB ) BAYER AG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-MAR-2001; 2001WO-EP03117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27-SEP-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human serotonin-like G protein-coupled receptor (5-HT-GPCR).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           serotonin-like G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAS12583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein-coupled receptor; 5-HT-GPCR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      including
                                                                                          specifically
                                                                                                                        useful
```

```
RESULT 3
AAU08710
ID AAU0
XX AAU0
XX AAU0
XX AAU0
XX AAU0
XX Hist
KW Hist
KW Hist
KW Drai
KW motc
KW motc
KW Alzh
KW Chrc
KW Chrc
KW Chrc
KW Chrc
XX C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SXSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 451
                                                                                                                                                                                                                                                                                                   digestive system; immune system; respiratory system; reproductive system; urinary system; peripheral nervous system; central nervous system; human; brain injury; mood disorder; anxiety; thought disorder; sleep disorder; motor unit disease; neurogenic disorder; myopathic disorder; neuroleptic; neurodegenerative disorder; psychotic disorder; cerebrovascular disorder; hizheimer's disease; parkinson's disease; muscle spasm; peripheral pain; chronic pain; tranquiliser; nootropic; neuroprotective; antiparkinsonian; analgesic; antidepressant; antiallergic; antiinflammatory; gene therapy;
                                                                                                                                                                              WO200170812-A2
                                                                                                                                                                                                                                                                                   cerebroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human histamine H2-like G protein-coupled receptor polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAU08710 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            in gene therapy. The present sequence represents the novel human 5-HT-GPCR polypeptide of the invention.
20-MAR-2000;
12-JUN-2000;
                                                                          20-MAR-2001; 2001WO-EP03162
                                                                                                                                                                                                                                   Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Histamine H2-like G protein-coupled receptor; histamine H2-like GPCR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
                                                                                                                                                                                                                                sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILIVVYCSMFRVARVAAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
  2000US-190554P
2000US-210734P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Protein;
                                                                                                                                                                                                                                                                                   vulnerary.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2318; DB 2
No. 2e-228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                          Ş
                                                           В
                                                                                   Qy
                                                                                                                   B
                                                                                                                                              δõ
                                                                                                                                                                             망
                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    receptor (GPCR) polypeptides and the nucleic acids encoding them. The sequences are useful for screening for agents which regulate the activity of histamine H2-11ke GPCR by contacting test compounds with the polypeptide and monitoring the activity. The polypeptides and their associated DNA sequences are useful for modulating the activity of a histamine H2-11ke GPCR in a disease of the digestive, immune, respiratory, reproductive, urinary, peripheral or central nervous system, especially a primary or secondary disorder after brain injury, disorder of mood, an anxiety disorder, a disorder of thought, a disorder of sleep, a disease of the motor unit, a neurogenic and myopathic disorder, a neurogenerative disorder, a psychotic disorder, a cerebrovascular disorder leading to peripheral and chronic pain. This sequence represents a human histamine H2-11ke GPCR polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; Fig 2; 93pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New human histamine H2-like G protein-coupled receptor polynucleotide and polypeptide which can be regulated for preventing, treating diseases of digestive, immune, respiratory, reproductive or central
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to a human histamine H2-like G protein-coupled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14-DEC-2000; 2000US-255147P.
421
                            421
                                                           361
                                                                                      361
                                                                                                                     301
                                                                                                                                                   301
                                                                                                                                                                               241
                                                                                                                                                                                                           241
                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                         RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILIVYYCSMFRVARVAAM
                                                                         KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                             QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                                                                                                                                                                   LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
            ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                   LPYFSFHLYVALSAQPISTGQVESVYTWIGYFCFTSNPFFYGCLNRQIRGELSKQFYCFF
                                                                                                                                                LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF
                                                                                                                                                                               QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                                                                                                                                                     LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                                                                                                                                                AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF
                                                                                                                                                                                                                                                                                                                                                                              AAVMAVIAKTPALRKEVEVEHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001-611486/70
)B; AAS14725.
ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                         KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 Similarity
451; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 2318; DB 22
Pred. No. 2e-228;
; Mismatches 0;
451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                   360
                                                                                                                                                                                                             300
                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                     360
                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
ş
                                                               Query Match
Best Local S
Matches 451
                                                                                                                                                                                                                                                                                                                                                                                                                             23-DEC-1999;
23-DEC-1999;
11-FEB-2000;
                                                                                                                                                                                                                                                                                                           21-AUG-2000;
26-SEP-2000;
26-SEP-2000;
20-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17-NOV-1999;
17-NOV-1999;
                                                                                      The sequence represents a human G-protein coupled receptor (GPCR), hRUP13. The endogenous and non-endogenous, constitutively activated versions of human G-protein coupled receptors (GPCR), are useful for direct identification of candidate compounds as receptor agonists, inverse agonists or partial agonists having applicability as therapeutic agents for treating diseases related to GPCR, e.g. lung cancer. Non-endogenous version of human GPCRs are also utilized in research settings and in vitro and in vivo system, incorporating GPCRs can be utilized to elucidate and understand the roles these receptors
                                                                                                                                                                                                 Endogenous and non-endogenous versions of human G-protein coupled receptors for direct identification of candidate compounds as agonists, inverse agonists or partial agonists for use as therapeutic agents -
                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                 28-APR-2000;
12-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200136471-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; G-protein
inverse agonist;
                                                                                                                                                                                   Claim
                                                                                                                                                                                                                                                                                                                                               12-JUN-2000;
12-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                  10-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                           10-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                     10-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                            14-MAR-2000;
14-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human G-protein coupled receptor,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAU04367
                                                                                                                                                                                                                                                                                 (AREN-)
          μ
MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
                                                                                                                                                                                                                                      2001-355616/37.
DB; AAS07940.
                                                                                                                                                                                                                                                               70
                                                                                in the human
                          tch 100.0%;
al Similarity 100.0%;
451; Conservative
                                                                                                                                                                                21; Page 98-100; 160pp; English.
                                                                                                                                                                                                                                                                                ARENA
                                                                                                                                                                                                                                                              Dang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          standard;
                                                               451
                                                                                                                                                                                                                                                                                                 99US-0171901

99US-0171902

99US-0181749

2000US-0181925

2000US-0189259

2000US-0195899

2000US-0195899

2000US-0195899

2000US-019678

2000US-020619

2000US-020619

2000US-020619

2000US-0216741

2000US-0216741

2000US-0235418

2000US-0235418

2000US-0235418

2000US-0242343

2000US-0242343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000WO-US31509
                                                                                                                                                                                                                                                               HT,
                                                                                                                                                                                                                                                                                 PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                               99US-0166369.
99US-0166369.
99US-0171900.
99US-0171901.
                                                               AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-0166088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   coupled receptor; GPCR; hRUP13; agonist;
                                                                                 condition,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Protein;
                                                                                                                                                                                                                                                                Lowitz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cancer
                                                                                                                                                                                                                                                                ξP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          451
                           0
                          Score 2318;
Pred. No. 2e-
D; Mismatches
                                                                                 both normal and diseased.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      hRUP13
                        . 2e-228;
0;
                                             DΒ
                                            22;
                           Indels
                                           Length
                                             451;
                           0
                           Gaps
          60
                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δõ
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
```

```
RESULT 5
AAG64123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                Human; guanosine triphosphate binding protein-coupled receptor; 6 protein-coupled receptor; 6PRv8; 6PRv16; 6PRv21; 6PRv17; 6PRv47; 6PRv51; 6PRv71; 6PRv72; cancer; liver cirrhosis; Alzhelmer's disease; cytostatic; hepatotropic; nootropic; neuroprotective; gene therapy; peptide therapy.
                                                                                                                     WPI;
                                                                                                                                                                                                                                      28-DEC-1999;
31-MAR-2000;
                                                                                                                                                                                                                                                                                                                        05-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAG64123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAG64123 standard; Protein; 451
   Example 1; Page 126-129;
                                New DNA encoding guanosine triphosphate binding protein coupled receptors and their expression products for screening potential anticancer and nootropic drugs and in diagnosis of these diseases
                                                                                                                                                     Sugiyama
                                                                                                                                                                    Matsumoto
                                                                                                                                                                                                                                                                                                                                                         WO200148188-A1
                                                                                                                                                                                                                                                                                                                                                                                        Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human G protein-coupled receptor GPRv47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-SEP-2001
                                                                                                                                                                                                                                                                                       28-DEC-2000;
                                                                                                                                                                                                       (HELI-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAVMAVIAKTPALRKEVEVEHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYLE 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LSVCFVSLAILSVSAINVERYYYVYHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
                                                                                                    2001-425662/45.
DB; AAH73514.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ETSEFLEQQLTSDIIMSDSYLRPAASPRLES 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                                                                                                                                                                      sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAM
                                                                                                                                                                                                       HELIX RES INST
                                                                                                                                                                   ູ່ທ
                                                                                                                                                      Oda T, S
Kishimoto
                                                                                                                                                                                                                                   2000JP-0101339
                                                                                                                                                                                                                                                                                       2000WO-JP09408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                         99JP-0375152
                                                                                                                                                                    Saito Y,
                                                                                                                                              ı,
170pp; Japanese
                                                                                                                                                     Kanzaki K, Yasuda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             451
                                                                                                                                                                    Yoshida
                                                                                                                                                                    ~
                                                                                                                                                      Suwa
Y;
                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
```

relates

6

nine human guanosine

triphosphate binding

```
RESULT 6
AAUU4386
IID AAUU4386
AC AAUU
XX AAUU4386
AC AAUU
XX G-PI
DE GPCI
XX G-PI
KW G-PI
LOOS Chin
XX Chin
X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                    Chimeric -
Chimeric -
  17-NOV-1999;
17-NOV-1999;
17-NOV-1999;
23-DEC-1999;
                                                                                                                                                                                                                                                                                                                         G-protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein (G
GPRv21, GPF
                                                                                                            16-NOV-2000;
                                                                                                                                                    25-MAY-2001
                                                                                                                                                                                            WO200136471-A2
                                                                                                                                                                                                                                                                                                                                                                     GPCR-Gs
                                                                                                                                                                                                                                                                                                                                                                                                             23-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAU04386;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAU04386 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein (G protein)-coupled receptors designated GPRv8, GPRv12, GPRv11 GPRv21, GPRv40, GPRv47, GPRv51, GPRv71 and GPRv72, and to the genes encoding them. These genes and proteins and antibodies against the protein are useful in the treatment, prevention, diagnosis and investigation of diseases associated with G protein-coupled receptors including cancer, cirrhosis of the liver and Alzheimer's disease. The present sequence is a G protein-coupled receptor of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match
Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>_</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLLLLVVYCSMFRVARVAAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ETSEFLEQQLTSDI IMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVVFAVLYFLLPLLLILVVYCSMFRVARVAAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAVMAVIAKTPALRKEVEVEHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYLE
                                                                                                                                                                                                                                                                                                   in coupled receptor; agonist; lung cancer
                                                                                                                                                                                                                                                                                                                                                                     fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       451
                                                                                                                                                                                                                                       Homo sapiens
Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
llarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                           (first
                                                                                                            2000WO-US31509
99US-0166088.
99US-0166099.
99US-0166369.
99US-0171900.
                                                                                                                                                                                                                                                                                                                                                                   protein, hRUP13-GS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       $
                                                                                                                                                                                                                                                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                                                                     cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                           GPCR; hRUP13-Gs;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 2318; DB 22
Pred. No. 2e-228;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     receptors,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GPRv16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
```

```
Query Match
Best Local S
Matches 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12-JUN-2000;
21-AUG-2000;
26-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-MAR-2000;
10-APR-2000;
10-APR-2000;
                                                                              hRUP13-Gs, being the human hRUP13 fused to the rat Gs protein. The endogenous and non-endogenous, constitutively activated versions of human G-protein coupled receptors (GPCR), are useful for direct identification of candidate compounds as receptor agonists, inverse agonists or partial agonists having applicability as therapeutic agents for treating diseases related to GPCR, e.g. lung cancer. Non-endogenous version of human GPCRs are also utilized in research settings and in vitro and in vivo system, incorporating GPCRs can be utilised to elucidate and understand the roles these receptors play in the human condition, both normal and diseased.
                                                                                                                                                                                                                                                                        Endogenous and non-endogenous versions of human G-protein coupled receptors for direct identification of candidate compounds as agonists, inverse agonists or partial agonists for use as therapeutic agents -
                                                                                                                                                                                                                                                                                                                                                                       Chen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-APR-2000;
28-APR-2000;
                                                        Sequence
                                                                                                                                                                                                                                                Example
                                                                                                                                                                                                                                                                                                                                                                                                 (AREN-)
                                                                                                                                                                                                                                                                                                                                                                                                                                        26-SEP-2000;
20-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12-MAY-2000;
12-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23-DEC-1999;
23-DEC-1999;
                                                                                                                                                                                                                     sequence is a
                                                                                                                                                                                                                                                                                                                                                                      Ŗ,
                                                                                                                                                                                                                                                                                                                               2001-355616/37
DB; AASO8271
                                                                                                                                                                                                                                                5,
                Similarity
                                                                                                                                                                                                                                                                                                                                                                                               ARENA
                                                                                                                                                                                                                                                                                                                                                                     Dang
                                                         869
                                                                                                                                                                                                                                               Page 146-149; 160pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                         99US-0171901

99US-0171902

2000US-0181749

2000US-0189258

2000US-0195898

2000US-0195898

2000US-01956078

2000US-0205630

2000US-0205630

2000US-0205741

2000US-0225760

2000US-0235418

2000US-0235418

2000US-0235418

2000US-0235418

2000US-0235418

2000US-0235418

2000US-0235433

2000US-0235433
    Conservative
                                                                                                                                                                                                                                                                                                                                                                      HT,
                                                                                                                                                                                                                                                                                                                                                                                               PHARM
                                                         AA;
                                                                                                                                                                                                                     G-protein
                                                                                                                                                                                                                                                                                                                                                                       Lowitz
                                                                                                                                                                                                                                                                                                                                                                                                 INC
               100.0%;
    0;
                                                                                                                                                                                                                    coupled receptor (GPCR)
Score 2318; DB 22;
Pred. No. 5e-228;
Pred. No. 5e-228;
    Indels
                            Length
                                                                                                                                                                                                                       iusion
                              869;
                                                                                                                                                                                                                     protein,
                                                                                                                                                                                            versions
```

```
뮍
                  Qy
                                         Вþ
                                                          Q
                                                                                  Вþ
                                                                                                     δÃ
                                                                                                                             Вb
                                                                                                                                              Qy
                                                                                                                                                                       В
                                                                                                                                                                                         Qy
                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                     QΥ
                    301
                                                                                    181
                                                                                                          181
                                         241
                                                                                                                              121
301
                                                               241
                                                                                                                                                   121
                                                                                                                                                                        61
                                                                                                                                                                                            61
                                                                                                                                                                                                                 MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
           LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF
                                                     QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQPLLCW
                                                                                                                                       LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                      RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLLLVVYCSMFRVARVAAM
                                                                                    RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAM
                                                                                                                             LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
LPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFF
                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                            120
                                                                                    240
                                                                                                         240
                                                                                                                              180
                                                                                                                                                   180
                                                                                                                                                                        120
                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                       60
                                         300
                                                               300
```

```
RESULT 7
AAU04382
ID WAAU6
AXX AAU6
AXX AAU6
AXX Huma
XXX Huma
XXX Huma
XXX Homc
AXX Inve
AXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-APR-2000;
10-APR-2000;
28-APR-2000;
12-MAY-2000;
12-JUN-2000;
12-JUN-2000;
21-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14-MAR-2000;
14-MAR-2000;
10-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-DEC-1999;
23-DEC-1999;
23-DEC-1999;
11-FEB-2000;
                      direct identification of candidate compounds as receptor agonists, inverse agonists or partial agonists having applicability as therapeutic agents for treating diseases related to GPCR, e.g. lung cancer.
Non-endogenous version of human GPCRs are also utilized in research
                                                                                                                                                                                                                                             Endogenous and non-endogenous versions of human G-protein coupled receptors for direct identification of candidate compounds as agonists,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human G-protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAU04382
                                                                                                                                                                                                Claim 22; Page 136-137; 160pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200136471-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAU04382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               inverse
  settings
                                                                                                               versions
                                                                                                                                                                                                                                                                                                                                                                                                                                            (AREN-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -FEB-2000;
                                                                                                          sequence is a human G-protein coupled receptor (GPCR), hRUP13, mu 8K. The endogenous and non-endogenous, constitutively activated sions of human G-protein coupled receptors (GPCR), are useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₩,
                                                                                                                                                                                                                                                                                                                                 2001-355616/37.
)B; AAS07997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             G-protein
se agonist;
  and
                                                                                                                                                                                                                                           agonists
                                                                                                                                                                                                                                                                                                                                                                                                                                            ARENA PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             standard;
                                                                                                                                                                                                                                                                                                                                                                                              Dang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99US-0171901.

99US-0171902.

2000US-0181749.

2000US-0189258.

2000US-0189259.

2000US-0195898.

2000US-0195899.

2000US-0195899.

2000US-0196078.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000US-0235418.
2000US-0235779.
2000US-0242332.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-0203630.
2000US-0210741.
2000US-0210982.
2000US-0226760.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000WO-US31509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000US-0242343
                                                                                                                                                                                                                                                                                                                                                                                                 TH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99US-0171900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99US-0166369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99US-0166088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              coupled receptor,
    vitro and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               coupled receptor; GPCR; hRUP13; agonist;
lung cancer; A268K; mutant; mutein.
                                                                                                                                                                                                                                           or partial agonists
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein;
                                                                                                                                                                                                                                                                                                                                                                                                   Lowitz
    in vivo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hRUP13,
  system,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mutant A268K.
  incorporating
                                                                                                                                                                                                                                           as therapeutic agents
  GPCRs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                       mutant
```

```
RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8×888888
    ACC XXX ACC XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        play in the human c
Note: The sequence
description of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             utilised to elucidate and understand the roles these receptors play in the human condition, both normal and diseased.

Note: The sequence is mutated at Ala 286 not at position 268. The description of the mutation is a typographical error in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            specification.
                       WPI;
                                                                   Мао
                                                                                                                                                                                                                                                                                          CN1299824-A.
                                                                                                                                                                                                                                                                                                                                        Homo
                                                                                                                                                                                                                                                                                                                                                                                                                              Human G protein coupled receptor, BioGPCR31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAG66453 standard; Protein;
                                                                                                            (SHAN-)
                                                                                                                                                          16-DEC-1999;
                                                                                                                                                                                                    16-DEC-1999;
                                                                                                                                                                                                                                                  20-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                  Human; G protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLLLLVVYCSMFRVARVAAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF
2001-523186/58.
DB; AAH75973.
                                                                                                                                                                                                                                                                                                                                      sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             450;
                                                                   Xie
                                                                                                               SHANGHAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   451
                                                                     ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ą
                                                                                                                                                          99CN-0124252
                                                                                                                                                                                                      99CN-0124252
                                                                                                               SHENGYUAN GENE
                                                                                                                                                                                                                                                                                                                                                                                  coupled receptor; BioGPCR31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 2313; DB 22;
Pred. No. 6.6e-228;
0; Mismatches 1;
                                                                                                            DEV
                                                                                                               င္ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     451
                                                                                                               LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
```

N-PSDB;

```
RESULT 9
AAW06595
ID AAW0
XX AAW
AC AAW0
XX G P
XX S Or;
XX OS Or;
XX AW
PD 24
XX AW
PD 24
XX AW
PF 1(
XX AW
P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOXCCXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
   This sequence represents a G protein conjugate receptor protein. The CDNA encoding this sequence was purified from rabbit stomach pylorus region smooth muscle cells using the primer sequences given in AAT49: 11. The G protein conjugate receptor protein may be used in the development of new drugs.
                                                                                                                                                                                              WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        G protein conjugate receptor protein
                                                                                                                                              New G
                                                                                                                                                                                                                                                                                                                                                                                                              stomach
                                                                                                Claim 1;
                                                                                                                                                                            N-PSDB;
                                                                                                                                                                                                                        (TAKE ) TAKEDA
                                                                                                                                                                                                                                                        16-MAR-1995;
                                                                                                                                                                                                                                                                                    16-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                 JP08245697-A
                                                                                                                                                                                                                                                                                                                                                                              Oryctolagus cuniculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAW06595;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW06595 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present sequence is the protein sequence for coupled receptor, BioGPCR31.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 173 MASVPVLGRVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILIVVYCSMF
                                                                                                                                                                                                                                                                                                                                                                                                             protein conjugate receptor
tomach pylorus region smooth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                            g protein
                                                                                                                                                                                           1996-482257/48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RIPGQIAEETSEFLEQQLTSDIIMSDSYLRPAASPRLES 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SKQFVCFFKPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDF 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAV 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MASVPVLGRVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILVVYCSMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               al Similarity
279; Conserv
                                                                                                                                                                            AAT49309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         receptor,
                                                                                               Fig 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Page 16-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      coupling acceptor and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63.5%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first
                                                                                                                             conjugate
for drugs
                                                                                                                                                                                                                        CHEM
                                                                                               and 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             æ
                                                                                                                                                                                                                                                       95JP-0057187
                                                                                                                                                                                                                                                                                    95JP-0057187
                                                                                                                                                                                                                          IND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (Disclosure);
                                                                                            25pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                              smooth
                                                                                                                                                                                                                          CTD
                                                                                                                          receptor protein and related DNA - useful to inhibit G protein-ligand binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                             protein;
h muscle (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 1472; DB 22;
Pred. No. 4.3e-142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     its code sequence -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22pp;
                                                                                                                                                                                                                                                                                                                                                                                                             rabbit; amplify;
cell; primer; PCR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chinese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         novel human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NoAbstract
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         G
                                   AAT49310-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sox
                                                                                                                                         Ohtaki
 Example 16; Page 263-64; 360pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAR91232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                        (TAKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         \vdash
```

```
Query Match
Best Local Similarity
Matches 247; Conser
                                                                                                                                           11-AUG-1994
11-AUG-1994
11-AUG-1994
30-SEP-1994
30-SEP-1994
02-NOV-1994
28-DEC-1994
20-JAN-1995
16-MAR-1995
                                                                             Fujii R,
Ohtaki T;
G-protein coupled receptor protein DNA and for isolating (ant)agonists for treatment cincontinence and diabetes
                                             WPI; 1996-139698/14.
N-PSDB; AAT13908.
                                                                                                                                                                                                                                                                                                                                           G-protein coupled cystic fibrosis;
                                                                                                                                                                                                                                                        10-AUG-1995;
                                                                                                                                                                                                                                                                             22-FEB-1996
                                                                                                                                                                                                                                                                                                  WO9605302-A1
                                                                                                                                                                                                                                                                                                                      Oryctolagus cuniculus.
                                                                                                                                                                                                                                                                                                                                                                            Rabbit G-protein coupled receptor
                                                                                                                                                                                                                                                                                                                                                                                                   27-AUG-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VVTWIGYFCFTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPIAAGQVEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVES
                                                                                                             TAKEDA
                                                                                                                                                                                                                                                                                                                                                                                                                                            standard; Protein;
                                                                                      Fukusumi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                94JP-0189274.
94JP-0236356.
94JP-02366357.
94JP-0270017.
94JP-0326611.
95JP-0007177.
95JP-0057186.
95JP-0093989.
                                                                                                             CHEM IND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A
                                                                                                                                                                                                                       94JP-0189273
                                                                                                                                                                                                                                 94JP-0189272
                                                                                                                                                                                                                                                       95WO-JP01599
                                                                                                                                                                                                                                                                                                                                            id receptor protein; G-PCRP;
incontinence; diabetes; dia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   252
                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 55.0%;
98.0%;
                                                                                       Hinuma
                                                                                                             LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                            252 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score
Pred.
                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                           diabetes; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                            protein portion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1276; DB 17;
No. 4.3e-122;
ismatches 3;
                                                                                       Hosoya
           of cystic
                                                                                       ž
                                                                                                                                                                                                                                                                                                                                                       agonist;
                                                                                       Ohgi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                            therapy
                       also
                                                                                                                                                                                                                                                                                                                                                        antagonist;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             252;
                       methods
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      204
```

English

```
AACOSTA AACOST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *88888888*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           vaccine; peptide
tissue growth fac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A portion (AAR91232) of a novel rabbit gastropyloric part smooth muscle-derived G-protein coupled receptor protein (G-PCRP) was identified as the product of cDNA clone pNN7 (AAT13908). The protein can be obtd. by expression of the encoding cDNA clone in transformed host cells. G-PCRPs (see also AAR91217-25 and AAR91228-33) can be used to screen agonists and antagonists that modulate G-PCRP activity, to raise antibodies and to develop assay systems.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; cytokine; cell proliferation; cell differentiation; gene therapy; vaccine; peptide therapy; stem cell growth factor; haematopolesis; tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorders; arthritis; inflammation.
                            disorders
                                                   Isolated nucleic acids and polypeptides, useful for preventing diagnosing and treating e.g. leukaemia, inflammation and immune
                                                                                                                                                                                                                                                                                                                                   28-FEB-2000;
18-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        06-NOV-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAO05867 standard; Protein; 138 AA.
                                                                                                                                                                                                                                                                                  (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                       26-FEB-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200164835-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CQLFVVVFAVLYFLLPLLILIVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRST 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLGRVSWEEGAPSVPPGCSLQWSHSAY 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLFLSVCFVSLAILSVSAINVERYYYV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLFLSVCFVSLAILSVSAINVERYYYV 144
                                                                                                                                       2001-514838/56.
)B; AAI85798.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VVTWIGYFCFTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VVTWIGYFCFTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPIAAGQVEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VHPMRYEVRMKLGLVASVLVGVWVKALAMASVPVLGRVSWEEGPPSVPPGCSLQWSHSAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    al Similarity
247; Conser
                                                                                                                                                                                                                                                                               HYSEQ
                                                                                                                                                                                                                        Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     252 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                2000US-0515126.
2000US-0577409.
                                                                                                                                                                                                                                                                                                                                                                                                                       2001WO-US04927.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ
                                                                                                                                                                                                                           Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 55.0%;
98.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ID NO
                                                                                                                                                                                                                           Ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 1276; DB 17; Pred. No. 4.3e-122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
```

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopolesis regulating activity, tissue growth factor activity, immunomodulatory activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and
                                                                                                                  09-MAR-1999;
15-SEP-1999;
                                                                                                                                                                                                                                                                                             antiparkinsonian; hypotensive; hypertensive; osteopathic;
antianginal; cardiant; cerebroprotective; antiulcer; antiallerg
antiangraine; antiemetic; tranquilizer; neuroleptic; nootropic;
                                                                                                                                                                                                                                                                                                                                           AXOR23; G protein coupled receptor; 7 transmembrane receptor; TM7 receptor; signal transduction; human; therapy; diagnosis; antibacterial; fungicide; protozoacide; virucide; cytostatic; analgesic; antidiabetic; anorectic; antiasthmatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          specification, but was obtained in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to human polynucleotides (AAI79941-AAI93841) and the encoded proteins (AA000010-AA013910) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 20;
                                                      Elshourbagy N,
                                                                                                                                                             01-MAR-2000;
                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                   anticonvulsant; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   09-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB19523 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Note: The sequence data for this patent did not
                                                                                                                                                                                             14-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         inflammation.
                                                                                     (SMIK)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        272 PQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGY 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 YKSWVSRPLP 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SESWVSRPLP 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PQTTPHRTFGGGKAAVVLLAVGGQFLLCWSPYFSFHLYVALSAQPISTGQVESVVTWIGY 60
                            2000-594306/56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FCFTSNPFFYGCLNRQIRGELSKQFVCFFKPAPEEELRLPSREGSIEENFLQFLQGTGCP 391
                                                                                     SMITHKLINE BEECHAM CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                    coupled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                               2000WO-US05230
                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ID NO 19759; 1399pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AΑ;
                                                                                                                99GB-0005317.
99US-0396610.
                                                        Shabon
                                                                                                                                                                                                                                                                                                                                                                                                                      receptor AXOR23.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29.98;
97.78;
                                                        Ů,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; Score 692; DB
; Pred. No. 1.2e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          atent did not form part of the printed electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 22;
.2e-62;
                                                                                                                                                                                                                                                                                                                                              antiasthmatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 138;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                               antiallergic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

Human; orphan G protein-coupled receptor; GPCR; hARE-5;

drug

screening

```
RESULT 13
AAY71293
ID AAY7
XX
AC AAY7
XX
AC AAY7
XX
DT 02-P
XX
DE Huma
                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Human orphan G protein-coupled receptor hARE-5.
                                      02-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           reagents, for screening of genetic mutations, for chromosome localization studies, for tissue expression studies, for low capacity screening and in high-throughput screening formats, i identifying membrane bound or soluble receptors, to configure screening methods for detecting the effect of added compounds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         acute heart failure, hypotension, hypertension, urinary retention, osteoporosis, angina pectoris, myocardial infarction, stroke, ulcer, allergy, benign prostatic hypertrophy, migraine, vomiting, psychotic and neurological disorders, and dyskinesias such as Huntington's disease or Gilles de la Tourette's syndrome. They are also useful
                                                                           AAY71293;
                                                                                                              AAY71293 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel AXOR23 polypeptide and polynucleotides which are members of G-protein coupled (7 transmembrane) receptors for treating infections, pain, cancer, diabetes, obesity, Parkinson's disease and Huntington's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         for identifying agonists and antagonists, which are useful for treating conditions associated with AXOR23 imbalance, as diagnostic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        particularly infections caused by HIV-1 or HIV-2, pain, cancer,
diabetes, obesity, anorexia, bulimia, asthma, Parkinson's disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1(a); Page 28-29; 34pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             treating bacterial,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   production.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  polynucleotides,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GPRX_ORYLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       transmembrane)
                                                                                                                                                                                                       315 --- ACTPQAWHPRALLQCLQRPPEGPAVGPSEAPEQTPE 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              production
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       present sequence is that of a novel human G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ASE---SVALFFMLLLDLTAVAGNAAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VVVFAVLYFLLPLLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PVL---VLTAVWAAAGLLGALSLL------GPPPAPPPA-----PARCSVLAGGLGPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LGLVASVLVGVWVKALAMASVPVLGRVSWEEGAPSVPPGCSLQWSHSAYCQL-----F
                                                                                                                                                                                                                                          QGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAEETSE
                                                                                                                                                                                                                                                                               VAYSAFAAHPFLYGLLQRPVRLALGRLSRRAL----PGPVR--
                                                                                                                                                                                                                                                                                                      ---PPLRPR--LPGGKAALAPALAVGQFAACWLPY----GCACLAPAARAAEAEAAVTW
                                                                                                                                                                                                                                                                                                                                                                                            SGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTW
                                                                                                                                                                                                                                                                                                                                                                                                                                RPLWALLAFALPALLLLGAYGGIFVVARRAALR-PPRPA--RGSRLRSDSLDSRLSIL--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GLLAAPPPGLGRVRLGPAPCRAARFLSAALLPACTLGVAALGLARYRLIVHPLRPGSRPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AMLSSSAL-FDHALFGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ASEVAGSLGLILAAVVEVGALLGNGALLVVVVLRTPGLRDALYLAHLCVVDLLAAASIMPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Such polypeptides and polynucleotides are useful for

    receptor, termed AXOR23, which shows homology
The invention relates to AXOR23 polypeptides and
des, recombinant materials and methods for their

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ξ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of mRNA and polypeptide in cells, and
                                                                                                              Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fungal, protozoan and viral infections,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; Score 438.5; DB
; Pred. No. 4e-36;
55; Mismatches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               146;
                                                                                                                                                                                                                                            424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein coupled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            as vaccines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7
                                                                                                                                                                                                                                                                                                                                                                                            328
                                                                                                                                                                                                                                                                                                                                                         277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14;
```

```
Query Match
Best Local S
Matches 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-FEB-1999;
12-MAR-1999;
12-MAR-1999;
12-MAY-1999;
28-MAY-1999;
28-MAY-1999;
                                                                    The present amino acid sequence is the hARE-5, an endogenous human orphan G protein-coupled receptor (GPCR). The full length cDNA was cloned by PCR using hARE-5 specific primers and human genomic DNA as template. The orphan GPCR of the invention, like all GPCRs has seven transmembrane alpha helices with an extracellular N-terminus and an intracellular C-terminus. However, no endogenous ligands has yet been identified for the proteins of the invention. The orphan GPCRs may be used in the identification of their endogenous ligands, and to screen potential GPCR agonists and antagonists for use as pharmaceutical agents. The proteins may also be used in the study of GPCR-mediated signalling cascades, and to elucidate their precise role in normal and diseased human conditions. Nucleic acid encoding human orphan GPCRs may be used for tissue localisation expression analysis to provide information about their function in healthy and pathological states.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-OCT-1999;
01-OCT-1999;
                                                 Sequence
                                                                                                                                                                                                                                                           Claim
                                                                                                                                                                                                                                                                                                                     N-PSDB;
                                                                                                                                                                                                                                                                                                                                                        Chen R,
                                                                                                                                                                                                                                                                                                                                                                                                                                          01-OCT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-MAY-1999;
28-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-NOV-1998;
16-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02-JUN-2000
                                                                                                                                                                                                                                                                                             Novel human orphan G
                                                                                                                                                                                                                                                                                                                                                                                                        12-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200031258-A2
                                                                                                                                                                                                                                                                                                                                                                                (AREN-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                transmembrane
                                                                                                                                                                                                                                                                                                                                 2000-400068/34.
                                                                                                                                                                                                                                                           10;
               Similarity
                                                                                                                                                                                                                                                                                                                     AAD01120
                                                                                                                                                                                                                                                                                                                                                                                ARENA
                                                                                                                                                                                                                                                                                   in the
                                                                                                                                                                                                                                                                                                                                                       Dang
                                                                                                                                                                                                                                                         Page 50-51; 102pp; English.
                                                  368
                                                                                                                                                                                                                                                                                                                                                        HT,
                                                                                                                                                                                                                                                                                                                                                                                PHARM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                receptor; signal cascade
                                                 AA;
                                                                                                                                                                                                                                                                                                                                                                                                     99US-0157294.
99US-0416760.
99US-0417044.
                                                                                                                                                                                                                                                                                shan G protein-coupled receptors and
identification of G protein-coupled
                                                                                                                                                                                                                                                                                                                                                                                                                                          99US-0157282
99US-0157293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9905-0157280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99US-0156555
99US-0156633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99US-0137127
99US-0137131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99US-0136436
99US-0136437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98US-0109213
99US-0120416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99US-0157281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99US-0156634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99US-0136567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99US-0136439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99US-0121852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-US23687
                                                                                                                                                                                                                                                                                                                                                        Liaw
                                                                                                                                                                                                                                                                                                                                                                                INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -0156653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -0141448
             18.9%;
                                                                                                                                                                                                                                                                                                                                                        œ,
 55;
 Score 438.5; DE Pred. No. 4e-36; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                        H
                         DB 21;
                       Length
                                                                                                                                                                                                                                                                               receptor agonists
                                                                                                                                                                                                                                                                                             the encoding cDNAs
  71;
Gaps
  14;
```

δÃ 밁

9

40 ASE---SVALFFMLLLDLTAVAGNAAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPL 96

ASEVAGSLGLTLAAVVEVGALLGNGALLVVVLRTPGLRDALYLAHLCVVDLLAAASIMPL

```
RESULT 14
AAB02827
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                     30-JUN-1999;
27-AUG-1999;
03-SEP-1999;
29-SEP-1999;
                                                                                                                                                     12-MAR-1999;
12-MAR-1999;
12-MAR-1999;
12-MAR-1999;
12-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                         Human; G proteir identification;
                                                                                                                                                                                                                                                 13-OCT-1998;
12-NOV-1998;
                                                                                                                                                                                                                                                                                13-OCT-1999;
                                                                                                                                                                                                                                                                                                                        WO200022131-A2
                                                                                                                                                                                                                                                                                                                                                                                                       Human G protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                AAB02827;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB02827
(AREN-)
                                                                                         28-MAY-1999;
                                                                                                    28-MAY-1999;
                                                                                                             28-MAY-1999;
28-MAY-1999;
                                                                                                                                   28-MAY-1999;
                                                                                                                                                                                                         26-FEB-1999;
                                                                                                                                                                                                                     16-FEB-1999;
                                                                                                                                                                                                                            20-NOV-1998;
27-NOV-1998;
                                                                                                                                                                                                                                                                                                    20-APR-2000
                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                            22-AUG-2000
                                                                                                                                              12-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RPLWALLAFALPALLLLGAYGGIFVVARRAALR-PPRPA--RGSRLRSDSLDSRLSIL--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VVVFAVLYFLLPLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LGLVASVLVGVWVKALAMASVPVLGRVSWEEGAPSVPPGCSLQWSHSAYCQL-----F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLLAAPPPGLGRVRLGPAPCRAARFLSAALLPACTLGVAALGLARYRLIVHPLRPGSRPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AMLSSSAL-FDHALFGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAEETSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VAYSAFAAHPFLYGLLQRPVRLALGRLSRRAL----PGPVR--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ---PPLRPR--LPGGKAALAPALAVGQFAACWLPY----GCACLAPAARAAEAEAAVTW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PVL---VLTAVWAAAGLLGALSLL------GPPPAPPPA-----PARCSVLAGGLGPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     --- ACTPQAWHPRALLQCLQRPPEGPAVGPSEAPEQTPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IGYFCFTSNPFFYGCLNRQIR----GELSKQFVCFFKPAPEEELRLPSREGSIEENFLQFL
ARENA
                                                                                                                                                                                                                                                                                                                                                                                   protein coupled receptor; GPCR; transmembrane receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard;
                                                                                                                                                                                                                                                                                                                                                                                                                            (first
                  99US-0156533.
99US-0156555.
99US-0156634.
                                                990S-0123945
990S-0123946
990S-0123949
990S-0123949
990S-0123951
990S-0136436
990S-0136437
990S-0136437
990S-0137127
990S-0137127
990S-0137131
990S-0137131
990S-0137131
                                                                                                                                                                                             98US-0109213.
98US-0110060.
99US-0120416.
99US-0121852.
99US-0123944.
PHARM
                                                                                                                                                                                                                                                                                99WO-US24065
                                                                                                                                                                                                                                                          98US-0170496
                                                                                                                                                                                                                                                                                                                                                                         agonist; screening;
                                                                                                                                                                                                                                                                                                                                                                                                       coupled receptor hARE-5 protein SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                            entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   368
                                                                                                                                                                                                                                                                                                                                                                         therapeutic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         424
                                                                                                                                                                                                                                                                                                                                                                         pharmaceutical;
                                                                                                                                                                                                                                                                                                                                                                                                       IJ
                                                                                                                                                                                                                                                                                                                                                                                                       NO:6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     277
```

```
RESULT 1:
AAU10303
ID AAU
                                                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                               DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 127; Conserv
                                                       G-protein coupled receptor; GCREC; vaccine; gene therapy; cell proliferation disorder; cancer; arteriosclerosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of a human GPCR. These non-endogenous human GPCRs can be useful for the direct identification of candidate compounds as receptors agonists, inverse agonists or partial agonists for use as pharmaceutical agents. AAA46017 to AAA46126 and AAB02825 to AAB02859 represent sequences used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention describes transmembrane receptors, preferably human G protein coupled receptors (GPCR), for which the endogenous ligand is unknown (orphan GPCR receptors). More specifically the present invention relates to non-endogenous, constitutively activately errors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gore
             neurological disorder; epilepsy; stroke; cardiovascular disorder; hypertension; ischaemic heart disease; gastrointestinal disorder; anorexia; peptic ulcer; autoimmune disorder; inflammatory disorde
                                                                                                G-protein
                                                                                                                                                                                        AAU10303 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-PSDB;
diabetes;
            hypertension;
anorexia; pept
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Non-endogenous, human G protein-coupled receptors for screening receptor, inverse or partial agonists useful as therapeutic age
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Behan
                                                                                                                               25-JAN-2002
                                                                                                                                                          AAU10303;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the exemplification of the present invention.
                                                                                                                                                                                                                                                              315
                                                                                                                                                                                                                                                                                          386
                                                                                                                                                                                                                                                                                                                       278
                                                                                                                                                                                                                                                                                                                                                    329
                                                                                                                                                                                                                                                                                                                                                                                 228
                                                                                                                                                                                                                                                                                                                                                                                                            269
                                                                                                                                                                                                                                                                                                                                                                                                                                         173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000-317986/27.
DB; AAA46019.
                                                                                                                                                                                                                                                              ---ACTPQAWHPRALLQCLQRPPEGPAVGPSEAPEQTPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AMLSSSAL-FDHALFGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMT 155
                                                                                                                                                                                                                                                                                                                                                                               ---PPLRPR--LPGGKAALAPALAVGQFAACWLPY----GCACLAPAARAAEAEAAVTW
                                                                                                                                                                                                                                                                                                                                                                                                 SGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTW 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ASE---SVALFFMLLLDLTAVAGNAAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPL
                                                                                                                                                                                                                                                                                         QGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAEETSE
                                                                                                                                                                                                                                                                                                                       VAYSAFAAHPFLYGLLQRPVRLALGRLSRRAL----PGPVR---
                                                                                                                                                                                                                                                                                                                                              IGYFCFTSNPFFFYGCLNRQIR---GELSKQFVCFFKPAPEEELRLPSREGSIEENFLQFL
                                                                                                                                                                                                                                                                                                                                                                                                                                       RPLWALLAFALPALLLLGAYGGIFVVARRAALR-PPRPA--RGSRLRSDSLDSRLSIL--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PVL---VLTAVWAAAGLLGALSLL------GPPPAPPPA-----PARCSVLAGGLGPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LGLVASVLVGVWVKALAMASVPVLGRVSWEEGAPSVPPGCSLQWSHSAYCQL-----F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GLLAAPPPGLGRVRLGPAPCRAARFLSAALLPACTLGVAALGLARYRLIVHPLRPGSRPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ASEVAGSLGLILAAVVEVGALLGNGALLVVVLRTPGLRDALYLAHLCVVDLLAAASIMPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Liaw CW, Lin I, Low
osteoporosis;
                                                                                                coupled receptor (GCREC) #4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Page 79-80;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                             (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA;
                                                                                                                                                                                        protein;
                                                                                                                             entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         187pp;
psoriasis; metabolic disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lowitz K, White
                                                                                                                                                                                        368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                        Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     438.5; DB
No. 4e-36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ç;
                                                                                                                                                                                                                                                                                          424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ,70
obesity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       agents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 present
                                                                                                                                                                                                                                                                                                                                                     385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96
                                                                                                                                                                                                                                                                                                                         314
                                                                                                                                                                                                                                                                                                                                                                                 277
                                                                                                                                                                                                                                                                                                                                                                                                                                         227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ä
```

```
Qy
                                                         В
                                                                                                                                     Ş
                   망
                                                                          Ş
                                                                                                                                                                                         Query Match
Best Local Sim
Matches 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           03-MAR-2000;
10-MAR-2000;
17-MAR-2000;
                                                                                                                                    Sequence
                                                                                                                                                               type, and to generate hybridisation probes useful in mapping the naturally occurring genomic sequence. This is the G-protein coupled receptor 4 (GCREC-4), one of 21 GCREC proteins described in the method
                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; Page 116-117; 141pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel G-protein coupled receptor polypeptides, for treating and preventing autoimmune/inflammatory disorders, neurological disorders, cell proliferative disorders, cardiovascular disorders and viral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lal P, Tang YT, Patterson C, Yao MG, Shih LL,
Lu DAM, Yue H, Khan FA, Policky JL, Au-Young
Harland L, Walsh RT, Lo TP, Borowsky ML;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAR-2001; 2001WO-US06814
                                                                                                                                                        the invention.
                                                                                                                                                                                                                                                                                                                                                                                                      The invention describes a novel isolated polypeptide,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-PSDB; AAS15900.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (INCY-) INCYTE GENOMICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13-SEP-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200166742-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                schizophrenic disorder; neuroskeletal disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                             infections
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20-MAR-2000;
156 LGLVASVLVGVWVKALAMASVPVLGRVSWEEGAPSVPPGCSLQWSHSAYCQL-----F 208
                    69
                                      97
                                                                            40
                                                          9
                                                                   ASE---SVALFFMLLLDLTAVAGNAAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPL 96
                  GLLAAPPPGLGRVRLGPAPCRAARFLSAALLPACTLGVAALGLARYRLIVHPLRPGSRPP 128
                                    AMLSSSAL-FDHALFGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMT 155
                                                        ASEVAGSLGLILAAVVEVGALLGNGALLVVVLRTPGLRDALYLAHLCVVDLLAAASIMPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001-656776/75
                                                                                                        Similarity
                                                                                                                                     368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-186854P.

2000US-188384P.

2000US-190453P.

2000US-190730P.
                                                                                               Conservative
                                                                                                                                     ξ,
                                                                                                        18.9%;
                                                                                                55;
                                                                                                        Score 438.5; DB 22; Pred. No. 4e-36;
                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Shih LL,
                                                                                                146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ů,
                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tribouley, Yang J;
                                                                                                                Length 368;
                                                                                                                                                                                                                                                                                                                                                                                                     selected
                                                                                              71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CM;
                                                                                              Gaps
                                                         68
                                                                                                                                                                  Of
                                                                                               14;
```

```
В
                                                            밁
                                                                                        Qy
                                                                                                                         В
                                                                                                                                                        δõ
                                                                                                                                                                                       밁
                                                                                                                                                                                                                   Qγ
                             õ
                                                                                                                                                                                                                                                    B
315
                               386
                                                              278
                                                                                             329
                                                                                                                            228
                                                                                                                                                          269
                                                                                                                                                                                       17.3
                                                                                                                                                                                                                      209
                                                                                                                                                                                                                                                      129
---ACTPQAWHPRALLQCLQRPPEGPAVGPSEAPEQTPE
                             QGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAEETSE
                                                            VAYSAFAAHPFLYGLLQRPVRLALGRLSRRAL----PGPVR--
                                                                                        IGYFCFTSNPFFYGCLNRQIR----GELSKQFVCFFKPAPEEELRLPSREGSIEENFLQFL
                                                                                                                         ---PPLRPR--LPGGKAALAPALAVGQFAACWLPY----GCACLAPAARAAEAEAAVTW
                                                                                                                                             SGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTW
                                                                                                                                                                                       RPLWALLAFALPALLLLGAYGGIFVVARRAALR.PPRPA--RGSRLRSDSLDSRLSIL--
                                                                                                                                                                                                                   VVVFAVLYFLLPLLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTS
                                                                                                                                                                                                                                                      PVL---VLTAVWAAAGLLGALSLL------GPPPAPPPA-----PARCSVLAGGLGPF
350
                               424
                                                                                                                                                        328
                                                                                                                           277
                                                              314
                                                                                                                                                                                       227
                                                                                                                                                                                                                      268
```

Search completed: October 21, 2002, 16:09:24 Job time: 38 secs

•			
	•		
			•
			•
	•		
			,
			w.,
			Ť
·,			
			4.5
	en e		
	· · · · · · · · · · · · · · · · · · ·		
	*		
		• • • • • • • • • • • • • • • • • • •	
	i		
			**
			,
	<b>.</b>		
			•

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Post-processing: Minimum Match 0% Maximum Match 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB seq
      3322.55
3322.55
3322.55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score
                                                                                                                                                                                                                                                                                                           349
347
347
346
346
340
340
340
340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Issued_Patents_AA:*

1: /cgn2_6/ptodata/1,

2: /cgn2_6/ptodata/1,

3: /cgn2_6/ptodata/1,

4: /cgn2_6/ptodata/1,

5: /cgn2_6/ptodata/1,

6: /cgn2_6/ptodata/1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-838-028-2
2318
1 MESSPIPQSSGNSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     October 21, 2002, 16:08:10 ; Search time 17 Seconds (without alignments) 647.997 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BLOSUM62
      555.00

1155.00

1155.00

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155.01

1155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          231628 seqs, 24425594 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MESSPIPQSSGNSSTLGRVP.....SDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/FCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/Packfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
      <u>0</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version c) 1993 - 2002
                              US-08-513-974B-52
US-08-513-974B-360
US-08-748-485-6
US-08-103-170-7
US-07-996-772A-10
US-08-18-485-6
US-08-13-170-6
US-08-13-170-6
US-08-13-170-6
US-08-13-170-6
US-08-13-170-6
US-08-13-170-2
US-08-13-170-2
US-08-13-170-2
US-08-13-170-2
US-08-13-18-13
US-08-13-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5.1.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Description.
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                               Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
13, Appl
4, Appli
6, Appli
15, Appli
13, Appli
14, Appli
15, Appli
17, Appli
18, Appli
19, Appli
19, Appli
10, Appli
11, Appli
11, Appli
12, Appli
12, Appli
12, Appli
13, Appli
14, Appli
15, Appli
16, Appli
17, Appli
18, Appli
19, Appli
19, Appli
10, Appli
11, Appli
11, Appli
12, Appli
13, Appli
14, Appli
15, Appli
16, Appli
17, Appli
18, Appli
19, Appli
19, Appli
19, Appli
10, Appli
11, Appli
11, Appli
12, Appli
13, Appli
14, Appli
15, Appli
16, Appli
17, Appli
17, Appli
18, Appli
19, Appli
19, Appli
19, Appli
10, Appli
11, Appli
11, Appli
11, Appli
12, Appli
13, Appli
14, Appli
15, Appli
16, Appli
17, Appli
17, Appli
18, Appli
19, Appli
19, Appli
19, Appli
10, Appli
10, Appli
11, Appli
11, Appli
12, Appli
13, Appli
14, Appli
15, Appli
16, Appli
17, Appli
17, Appli
18, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6, Appli
7, Appli
10, Appl
3, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-513-974B-52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STATE:
```

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28
319.5	319.5	319.5	319.5	319.5	319.5	320	320	320	321	321	326.5	326.5	326.5	326.5	332.5	332.5	332.5
13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	14.1	14.1	14.1	14.1	14.3	14.3	14.3
408	408	408	408	402	402	501	501	501	559	559	400	400	400	388	572	572	572
4	4	Н	ب	٢	٢	ν	N	_	w	N	4	4	Н	-	رت.	w	ω
US-08-450-962-5	US-08-450-962-2	US-08-351-473B-3	US-07-916-901-2	US-08-087-772A-15	US-08-444-734A-6	US-09-030-582-9	US-08-467-568-9	US-08-722-001-14	US-09-206-899-20	US-08-406-855A-20	US-08-450-962-6	US-08-450-962-4	US-08-351-473B-5	US-08-087-772A-2	PCT-US95-04203-2	US-09-206-899-2	US-08-244-354-2
Sequence 5, Appli	'n	ω	'n		6	9,	9,	14,	Sequence 20, Appl	Sequence 20, Appl	Sequence 6, Appli	Sequence 4, Appli	•	ν,	Sequence 2, Appli	Sequence 2, Appli	Sequence 2, Appli

### ALIGNMENTS

```
APPLICATION NUMBER: JP 7-007177
FILING DATE: 20-JAN-1995
PRIOR APPLICATION DATA:
APPLICATION UMBER: JP 6-326611
FILING DATE: 28-DEC-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 6-270017
FILING DATE: 02-NOV-1994
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 536

PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/JP95/0159:
FILING DATE: 10-AUG-1995

PRIOR APPLICATION NUMBER: JP 7-093989

APPLICATION NUMBER: JP 7-093989

FILING DATE: 19-AUG-1995

PRIOR APPLICATION NUMBER: JP 7-057186

APPLICATION NUMBER: JP 7-057186

FILING DATE: 16-MAR-1995

PRIOR APPLICATION DATA:
APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Hinuma, Shuji
APPLICANT: Hosoya, Masaki
APPLICANT: Fujii, Ryo
APPLICANT: Ohtaki, Tetsuya
APPLICANT: Okusumi, Shoji
APPLICANT: Ohgi, Kazuhiro
TITLE OF INVENTION: G PROTEIN COUF
TITLE OF INVENTION: G PROTEIN COUF
NUMBER OF SEQUENCES: 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/513,974B
FILING DATE: 14-SEP-1995
CIASCIPICATION TO A STATE TO A ST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: DIKE, BRONSTEIN, ROBERTS & CUSHMAN, LLP STREET: 130 Water Street CITY: Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: UZIP: 02109
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          52, Application US/08513974B
o. 6114139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ΜA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PCT/JP95/01599
JP 6-236357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUPLED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RECEPTOR PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       THEREOF
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; MOLECULE TYPE: peptide US-08-513-974B-52
                                                                                                                                                                                                                                                                US-08-513-974B-360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 98.0
Matches 247; Conservative
                                                                                                                                                                                                                               Sequence 360, Application US/08513974B Patent No. 6114139
                                                                                                                                                                                                                Patent No.
GENERAL II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: 617-52
INFORMATION FOR SEQ
                                                              APPLICANT: Hinuma, Shuji
APPLICANT: Hosoya, Masaki
APPLICANT: Fujii, Ryo
APPLICANT: Ohtaki, Tetsuya
APPLICANT: Fikusumi, Shoji
APPLICANT: Ohgi, Kazuhiro
TITLE OF INVENTION: G PROTEIN COUPLED RECEPTOR PROTEIN,
TITLE OF INVENTION: PRODUCTION, AND USE THEREOF
NUMBER OF SEQUENCES: 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 252 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION: TELEPHONE: 617-523-3400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 6-
FILING DATE: 11-AUG-1994
ATTORNEY/AGENT INFORMATION:
                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: DIKE, BRONSTEIN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          145 VHPMRYEVRMTLGLVASVLVGVMVKALAMASVPVLGRVSWEEGAPSVPPGCSLQWSHSAY 204
                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                           265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: FILING DATE: 11-AUG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE: 11-AUG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Resnick, David S. REGISTRATION NUMBER: 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: FILING DATE: 30-SEI
                STREET:
                                                                                                                                                                                                                                                                                                                             VVTWIGYFCFTS 336
                                                                                                                                                                                                                                                                                                                                                                                                            MVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVES 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRST 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VHPMRYEVRMKLGLVASVLVGVWVKALAMASVPVLGRVSWEEGPPSVPPGCSLQWSHSAY 120
                                                                                                                                                                                                                                                                                                                                                                                              MVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPIAAGQVEN 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRST
                                                                                                                                                                                                                INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                amino acid
Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DATE:
                  130 Water Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   617-523-6440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11-AUG-1945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11-AUG-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-SEP-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-SEP-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55.0%;
98.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JP 6-236356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JP 6-189273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34,235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JP 6-189272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JP 6-189274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 1276; DB 3;
Pred. No. 1.3e-92;
2; Mismatches 3;
                               ROBERTS & CUSHMAN, LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 252;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0:
```

```
DЬ
                                                                       οy
                                                                                                        рь
                                                                                                                                   ρ
                                                                                                                                                                                                                                 US-08-513-974B-360
                                                                                                                                                             Query Match
Best Local Similarity
Matches 247; Conserva
                                                                                                                                                                                                                                                                                                                        TELEFAX: 617-523-6440 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/JP95/01599
FILING DATE: 10-AUG-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 6
FILING DATE: 11-AUG-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 6
FILING DATE: 28-DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn Rel CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: 617-523-3400
                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 11-AUG-1994 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE: 30-SEP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 6:
FILING DATE: 02-NOV-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 16-MAR-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 19-AUG-
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                              MOLECULE TYPE:
                                                                          145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
ZIP: 021
                 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: JP 6 FILING DATE: 30-SEP-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1: CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                             61
                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: JP 7:
FILING DATE: 16-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                          LENGTH:
                                         VHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLGRVSWEEGAPSVPPGCSLQWSHSAY 204
                                                                                                        CQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRST
02109
                                                                                                                                                                                                                                                                          amino acids
                                                                                                                                                                                                                                                                                                                                                                                                              Resnick, David S
                                                                                                                                                                                                                                                                                                                                        617-523-6440
                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PatentIn Release #1.0,
                                                                                                                                                                                                                                            protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-AUG-1945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-AUG-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-SEP-1994
                                                                                                                                                                                  55.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JP 6-270017
                                                                                                                                                                                                                                                                                                                                                                                                                                                             JP 6-189272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JP 6-189273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JP 6-189274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JP 6-236356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JP 6-236357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JP 6-326611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JP 7-007177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JP 7-057186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JP 7-093989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/08/513,974B
                                                                                                                                                                 Score 1276; DB 3;
Pred. No. 1.3e-92;
2; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Version
                                                                                                                                                                     .3e-92;
les 3;
                                                                                                                                                                                               Length 252;
                                                                                                                                                                     Indels
                                                                                                                                                                     0;
                                                                                                                                                                    Gaps
                                                                                                                                                                     0
```

```
Ş
                                밁
                                                          δÃ
                                                                                               В
                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δĀ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                              US-08-748-485-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-748-485-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                              Matches
                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent No.
                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US
FILING DATE: Herewith
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Billings, Lucy J. REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-0159
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-855-0555
                                                                                                                                                                                                                                           IMMEDIATE SOURCE:
LIBRARY: GenBank
CLONE: 236184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ Vers
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Goli, Surya K. APPLICANT: Murry, Lynn E. TITLE OF INVENTION: NOVEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Au-Young, Janice
APPLICANT: Guegler, Karl J.
APPLICANT: Goli, Surya K.
APPLICANT: Murry, Lynn E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
158 LVASVLVGVWVKALAMASVPVLGRVSWEE----
                                                             101 SSALFDHAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLG 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241 VVTWIGYFCFTS 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                  75
                                                                                                                            43 SVALFFMLLLDLTAVAGNAAVMAVIAKTPALRKEV--FVFHLCLVDLLAALTLMPLAMLS 100
                                                                                                                                                                                                                                                                                           STRANDEDNESS: sir
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: 31/4 FOR CITY: Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: 415-845-4166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                              ENGTH:
                                                                                               SVVLTTLILI---TIAGNVVVCLAVSLNRRLRSLTNCFIVSLAATDLLLGLLVLPF----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VVTWIGYFCFTS 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVES 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CQLFVVVFAVLYFLLPLLLILYVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRST
                              -SAIYQLSFTWSFGHVFCNIYTSLDVMLCTASILNLFMISLDRYCAVTDPLRYPVLVTPV 133
                                                                                                                                                                106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94304
                                                                                                                                                                                                                                                                                                                             amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/08748485
                                                                                                                                                                                                                                                                                                                                           358 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3174 Porter Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FastSEQ Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INCYTE PHARMACEUTICALS, INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Herewith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Diskette
                                                                                                                                                                                                                                                                                                              single
                                                                                                                                                           15.1%; Score 351; DB 2; Length 35 27.5%; Pred. No. 4.1e-20; tive 58; Mismatches 150; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NOVEL HISTAMINE H2 RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/08/748,485
                                                                                                                                                                                                                                                                                                                                                                             6:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
--GAPSVPPGCSLQWSHSAYCQLFVVV 211
                                                                                                                                                                                           Length 358;
                                                                                                                                                           72;
                                                                                                                                                             Gaps
                                                                                               74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                              12;
```

```
RESULT 4
US-08-103-170-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DЬ
                                                                    ORGANISM:
US-08-103-170-7
                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 7 Patent No.
Best Local Similarity Matches 100; Conserv
                                                                                                                                                                                                              TELEFAX: (703)486-234
TELEX: 24885 OPAT UR
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: FITTLE OF INVENTION: FITTLE OF INVENTION: 7
NUMBER OF SEQUENCES:
                                                                                                       MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 31,451
REFERENCE/DOCKET NUMBER: 23
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)521-4500
                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 24-DEC-1990 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 359 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: Patentin Rel CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            338 PLKLQ------VWSGTELTHPQGNP 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       382 LQFLQGTGCPSESWVSRPLPSPKQEP 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          278 ANSALNPILYAALNRDFRTAYQQLFHCKFASHNSHKTSLRLNNSLLPRSQSREGRWQEEK 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      212 FAVLYFLLPLLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGA 271
                                                                                                                                           TYPE: ami
TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Arlington STATE: Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                      NAME: Lavalleye, Jean-Paul
                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 07/633,060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FCFTSNPFFYGCLNRQIRGELSKQFVCFFKP--APEEELRL------PSREGSIEENF 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGY 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DGLVTFYLPLLIMCVTYYRIFKIAREQAKRINHISSWKAA--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -----TIREHKATVTLAAVMGAFIICWFPYFTAFVYRGLRGDDAINEAVEGIVLWLGY 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7, Application US/08103170
o. 5885824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22202
                                                                                                                                                        amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Virginia
Y: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gantz,
                                                                                                                                                                                                                                                   (703)486-2347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yamada, Tadataka
Gantz, Ira
                                                                                                                                           unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PatentIn Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OBLON, SPIVAK, MCCLELLAND,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Recombinant Genomic Clones Encoding Histamine H1, H2, and H3 Receptors, Meti Thereof, and Proteins Encoded Therefrom 41
                15.1%; Score 350; DB 2; 28.7%; Pred. No. 4.9e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/08/103,170
                                                                                                                                                                                                                                                                                                     2363-017-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MAIER & NEUSTADT
                                 Length 359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Methods For Production
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       224
```

Conservative

56;

Mismatches

Indels

52;

Gaps

10;

10;

```
US-07-996-772A-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-07-996-772A-10
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 10, Application US/07996772A Patent No. 5472866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent No.
                                                                                                                                                                                                                                       TELEFAX: (212) 664-0525
TELEX: 422523 COOP UI
INFORMATION FOR SEQ ID NO: 10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 359 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: DNA ENCODING 5-HT4A SEROTO TITLE OF INVENTION: RECEPTORS AND USES THEREOF NUMBER OF SEQUENCES: 12
                                                                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                TELEPHONE: (212) 977-9550
                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION: NAME: White, P., John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn Release #1.24
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Branchek, Theresa A.
APPLICANT: Weinshank, Richard L.
TITLE OF INVENTION: DNA ENCODING 5-HT4A SEROTONIN
                                                                                              IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Gerald, Christophe APPLICANT: Hartig, Paul R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          134 RVAVSLVLIWVISITLSFLSIHLGWNSTNETSSFNHTIPKCKVQVN-----LVYGLVDGL 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     282 ALNPILYATLNRDFRTAYQQLFRC--RPASHNAQETSLRSNSSQLARN 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          335 TSNPFFYGCLNRQIRGELSKQFYCFFKPAPE -- EELRLPSREGSIEEN 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: NEW YORK
STATE: NEW YORK
ZIP: 10112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         75
                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER: 28,678
REFERENCE/DOCKET NUMBER: 42667/JPW/TEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22
                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET:
                                                                                                                                                          STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/07/996,772A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ----TIGEHKATVTLAAVMGAFIICWFPYFTVFVYRGLKGDDAINEAFEAVVLWLGYANS 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCF 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VTFYLPLLVMCITYYRIFKIARDQAKRIHHMGSWKAA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LYFLLPLLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SSALFDHAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLG 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LVASVLVGVWVKALAMASVPV-LGRVSWEEGAP--SVPPGCSLQWSHSAYCQLFVVVFAV 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SVVLTVLILI----TIAGNVVVCLAVGLNRRLRSLTNCFIVSLAITDLLLGLLVLPF----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SVALFFMLLLDLTAVAGNAAVMAVIAKTPALRKEV--EVEHLCLVDLLAALTLMPLAMLS 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -SAFYQLSCRWSFGKVFCNIYTSLDVMLCTASILNLFMISLDRYCAVTDPLRYPVLITPV 133
                                                                                                                                                                               amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30 ROCKEFELLER PLAZA
                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COOPER & DUNHAM
                                                                                                                       protein
                                                                                                                                                          single
                                                                                                                                                                                                                                                                                                                                                                                                                        435
  15.1%;
28.7%;
  Score
Pred.
349; DB 1;
No. 5.8e-20;
                  Length 359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       74
```

```
Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-748-485-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 3, Application US/08748485 Patent No. 5817480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL
                                                                                   INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Au-Young, Janico
APPLICANT: Guegler, Karl J
APPLICANT: Goli, Surya K
APPLICANT: Murry, Lynn E.
TITLE OF INVENTION: NOVEL
                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US
FILING DATE: Herewith
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                        TELECOMMUNICATION INFORMATION: TELEPHONE: 415-855-0555
IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              282 ALNPILYATLNRDFRTAYQQLFRC--RPASHNAQETSLRSNSSQLARN 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  275 TPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCF 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET: 3174 POI
                                TYPE: amino a STRANDEDNESS:
                                                                                                                         TELEX:
                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM COOOPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE:
                  TOPOLOGY:
                                                                     LENGTH:
                                                                                                                                        TELEFAX: 415-845-4166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TSNPFFYGCLNRQIRGELSKQFVCFFKPAPE--EELRLPSREGSIEEN 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ----TIGEHKATVTLAAVMGAFIICWFPYFTVFVYRGLKGDDAINEAFEAVVLWLGYANS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VTFYLPLLVMCITYYRIFKIARDQAKRIHHMGSWKAA---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LYFLLPLLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQT 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RVAVSLVLIWVISITLSFLSIHLGWNSRNETSSFNHTIPKCKVQVN-----LVYGLVDGL 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LVASVLVGVWVKALAMASVPV-LGRVSWEEGAP--SVPPGCSLQWSHSAYCQLFVVVFAV 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -SAFYQLSCRWSFGKVFCNIYTSLDVMLCTASILNLFMISLDRYCAVTDPLRYPVLITPV 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SSALFDHAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLG 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SVVLTVLILI---TIAGNVVVCLAVGLNRRLRSLTNCFIVSLAITDLLLGLLVLPF---- 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SVALFFMLLLDLTAVAGNAAVMAVIAKTPALRKFV--FVFHLCLVDLLAALTLMPLAMLS 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94304
                                                 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CA
                                                                 359 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3174 Porter Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Au-Young, Janice
Guegler, Karl J.
Goli, Surya K.
                                                                                                                                                                                                                                                                                                                                                                                      FastSEQ Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                       IBM Compatible
                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INCYTE PHARMACEUTICALS,
                                                                                                                                                                                                                                                                                                                                Herewith
                                                                                                                                                                                                                                                                                                                                                                                                                                           Diskette
                                single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NOVEL HISTAMINE H2 RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                         DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Janice
                                                                                                                                                                                                                                                                                                                                                      US/08/748,485
                                                                                                                                                                                                           36,749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    56;
                                                                                                                                                                                             PF-0159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                             SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    140;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       225
```

```
; LENGTH: 348
; TYPE: PRT
; ORGANISM: Homo s
US-08-875-540-13
                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/08/875,540A
CURRENT FILLING DATE: 1998-01-05
EARLIER APPLICATION NUMBER: PCT/EP96/00397
EARLIER FILLING DATE: 1997-01-30
EARLIER APPLICATION NUMBER: GB9503866.7
EARLIER FILLING DATE: 1995-01-30
NUMBER OF SEQ ID NOS: 15
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 7
US-08-875-540-13
; Sequence 13, Ap
                                                                                                       Ş
   밁
                              δ
                                                                   В
                                                                                                                                                 밁
                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; CLONE:
US-08-748-485-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence 13, Application Patent No. 6015888
                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: IMPROVEMENTS IN OR TITLE OF INVENTION: HUMAN HISTAMINE H2 FILE REFERENCE: 09347/002001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Pearson, Ronald Carl Alan APPLICANT: Wright, Simon Ralph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Heath, Paul Roy
APPLICANT: Orange, Paul Richard
   137
                                       164
                                                                                                               107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      282 ALNPILYATLNRDFRTAYQQLFRC--RPASHNAQETSLRSNSSQLARN 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               335 TSNPFFYGCLNRQIRGELSKQFVCFFKPAPE--EELRLPSREGSIEEN 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          226 ----TIGEHKATVTLAAVMGAFIICWFPYFTVFVYRGLKGDDAINEAFEAVVLWLGYANS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      134 RVAVSLVLIWVISITLSFLSIHLGWNSRNETSSFNHTIPKCKVQVN-----LVYGLVDGL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101 SSALFDHAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLG
                                                                           77
                                                                                                                                                   22
                                                                                                                                                                  22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        43 SVALFFMLLLDLTAVAGNAAVMAVIAKTPALRKEV--FVFHLCLVDLLAALTLMPLAMLS 100
                              VGVWVKALAMASVPV-LGRVSWEEGAPS--VPPGCSLQWSHSAYCQLFVVVFAVLYFLLP 220
                                                                                                                                           LAVLILITVAGNVVVCLAVGLNRRLRNLTNCFIVSLAITDLLLGLLVLPF----SAIYQ 76
VLIWVISITLSFLSIHLGWNSRNETSKGNHTTSKCNVQVN-----EVYGLVDGLVTFYLP 191
                                                                  LSCKWSFGKVFCNIYTSLDVMLCTASILNLFMISLDRYCAVMDPLRYPVLVTPARVAISL 136
                                                                                          HAL---FGEVACRLYLFUSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTUGUVASVL 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VTFYLPLLVMCITYYRIFKIARDQAKRIHHMGSWKAA-----------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LVASVLVGVWVKALAMASVPV-LGRVSWEEGAP--SVPPGCSLQWSHSAYCQLFVVVFAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCF 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LYFLLPLLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQT 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -SAFYQLSCRWSFGKVFCNIYTSLDVMLCTASILNLFMISLDRYCAVTDPLRYPVLITPV 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SVVLTVLILI----TIAGNVVVCLAVGLNRRLRSLTNCFIVSLAITDLLLGLLVLPF----
                                                                                                                                                                                                                         99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          163952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                              sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15.1%;
28.7%;
                                                                                                                                                                                                                 15.0%; Score 347; DB 3; 128.6%; Pred. No. 8.1e-20; tive 57; Mismatches 132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08875540A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          56; Mismatches 140; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 349; DB 2;
Pred. No. 5.8e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RELATING TO
RECEPTORS
                                                                                                                                                                                                                                                       Length 348;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   THE DETECTION OF VARIATIONS
                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               52;
                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       74
                                                                                                                                                                                                                     10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Z
```

US-08-103-170-4

Sequence 4, Application US/08103170 Patent No. 5885824 GENERAL INFORMATION:

APPLICANT:

Yamada,

Tadataka

```
GENERAL INFORMATION:

APPLICANT: Wright, Simon Ralph
APPLICANT: Heath, Paul Roy
APPLICANT: Orange, Paul Richard
APPLICANT: Orange, Paul Richard
APPLICANT: Orange, Paul Richard
APPLICANT: Orange, Paul Richard
APPLICANT: OF INVENTION: DETECTION OF VARIATIONS IN
FILE REFERENCE: 09347/004001
CURRENT FILING DATE: 1999-08-03
EARLIER APPLICATION NUMBER: PCT/GB97/01075
EARLIER APPLICATION NUMBER: PCT/GB97/01075
EARLIER FILING DATE: 1997-04-18
NUMBER OF SEQ ID NOS: 19
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 17
                                         Qγ
                                                                                    밁
                                                                                                                       Qy
                                                                                                                                                                     밁
                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                        Ъ
                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                        Ъ
                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-171-456-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 8
US-09-171-456-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent No. 6346380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 348
TYPE: PRT
ORGANISM: Homo:
                                             341
                                                                                                                                                                       192
                                                                                                                                                                                                                                                        137
285 YAALNRDFRTGYQQLFCC------RLANRNSHKTSLRSNASQ 320
                                                                                                                                281
                                                                                                                                                                                                                 221
                                                                                                                                                                                                                                                                                      164 VGVWVKALAMASVPV-LGRVSWEEGAPS--VPPGCSLQWSHSAYCQLFVVVFAVLYFILP 220
                                                                                                                                                                                                                                                                                                                                                                         107 HAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVL 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            341 YGCLNRQIRGELSKQFVCFFKPAPEEELRLPSREG---SIEENFLQ 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          192
                                                                                                                                                                                                                                                                                                                                           77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  221 LLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTF
                                                                                                                                                                                                                                                                                                                                                                                                                       22 LAVLILITVAGNVVVCLAVGLNRRLRNLTNCFIVSLAITDLLLGLLVLPF-----SAIYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                              49 MLLLDLTAVAGNAAVMAVIAKTPALRKFV--FVFHLCLVDLLAALTLMPLAMLSSSALFD 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
tes 99; Conserv
                                         YGCLNRQIRGELSKQFVCFFKPAPEEELRLPSREG---SIEENFLQ 383
                                                                                                            GGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFF 340
                                                                                                                                                                                                                                                 VLIWVISITLSFLSIHLGWNSRNETSKGNHTTSKCNVQVN----EVYGLVDGLVTFYLP
                                                                                                                                                                       LLIMCITYYRIFRVARDQAKRIDHISSWK--
                                                                                ----ATVTLAAVMGAFIICWFPYFTAFVYRGLRGDDAINEMLEAIVLWLGYANSALNPIL
                                                                                                                                                                                                          LLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTF 280
                                                                                                                                                                                                                                                                                                                                      LSCKWSFGKVFCNIYTSLDVMLCTASILNLFMISLDRYCAVMDPLRYPVLVTPARVAISL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LLIMCITYYRIFRVARDQAKRIDHISSWK------------AATIREHR--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YAALNRDFRTGYQQLFCC------RLANRNSHKTSLRSNASQ 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ----ATVTLAAVMGAFIICWFPYFTAFVYRGLRGDDAINEMLEAIVLWLGYANSALNPIL 284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/09171456A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15.0%; Score 347; DB 4; 28.6%; Pred. No. 8.1e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches 132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 4; Length 348;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IN HUMAN H2 RECEPTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                     -AATIREHR--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                     228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10;
```

```
RESULT 10
US-08-103-170-6
                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                  ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                      밁
                                                                                                                                   Ş
                                                                                                                                                                      ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-103-170-4
Sequence 6, Application Patent No. 5885824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity Matches 100; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (703)486-234:
TELEX: 24885 OPAT UR
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: HESTITLE OF INVENTION: HESTITLE OF INVENTION: THE NUMBER OF SEQUENCES: 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 359 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REGISTRATION NUMBER: 31,451
REFERENCE/DOCKET NUMBER: 2363-017-55
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 24-DEC-1990
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 24-DEC-1990
                                                                                                                                                                          226
                                                                                                                                                                                                                                                                                                           282 ALNPILYATLNRDFRTAYQQLFRC--RPASHNAQETSLRSNSSQLARN
                                                                                                                                                                                                                                            189
                                                                                                                                                                                                                                                                                                                                                                                                                101 SSALFDHAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLG 157
                                                                                                                                                                                                                                                                                                                                                                                   75
                                                                                                                                                                                                                                                                                                                                                                                                                                                     22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Arlington
STATE: Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    43 SVALFFMLLLDLTAVAGNAAVMAVIAKTPALRKFV--FVFHLCLVDLLAALTLMPLAMLS 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: (703)521-4500
TELEFAX: (703)486-2347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: OBLON,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Lavalleye, Jean-Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                      TSNPFFYGCLNRQIRGELSKQFYCFFKPAPE - - EELRLPSREGSIEEN
                                                                                                                                                                      ----TIGEHKATVTLAAVMGAFIICWFPYFTVFVYRGLKGDDAINEAFEAVVLWLGYANS
                                                                                                                                                                                                         TPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCF
                                                                                                                                                                                                                                            VTFYLPLLVMCITYYRIFKIARRIHDQAKHMGSWKAA---
                                                                                                                                                                                                                                                                             LYFLLPLLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQT
                                                                                                                                                                                                                                                                                                                                                                                                                                                     SVVLTVLILI ---TIAGNVVVCLAVGLNRRLRSLTNCFIVSLAITDLLLGLLVLPF----
                                                                                                                                                                                                                                                                                                                                                                                 -SAFYQLSCRWSFGKVFCNIYTSLDVMLCTASILNLFMISLDRYCAVTDPLRYPVLITPV 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1755 Jefferson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Recombinant Genomic Clones Encoding Histamine H1, H2, and H3 Receptors, Methods For Production Thereof, and Proteins Encoded Therefrom
                 US/08103170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SPIVAK, MCCLELLAND,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US 07/633,060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/08/103,170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Davis Highway, Fourth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. le-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2; Length 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MAIER & NEUSTADT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                      327
                                                                                                                                        380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                             274
                                                                                                                                                                                                                                                                                                               188
                                                                                                                                                                                                                                                                                                                                             214
                                                                                                                                                                                                                                                                                                                                                                                                                                                     74
                                                                                                                                                                                                                                            225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10;
```

```
οy
                                                                                                                                                                                                                                                                                                                                                         ρy
                                                                            Вb
                                                                                                                QΥ
                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                              δã
                                                                                                                                                                                                                                                                                                                        Вb
                                                                                                                                                                                                                                                                                                                                                                                                     DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; MOLECULE TYPE: protein US-08-103-170-6
                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: Rec
TITLE OF INVENTION: His
TITLE OF INVENTION: The
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: 23
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)521-4500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US 0: FILING DATE: 24-DEC-1990 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Yamada APPLICANT: Gantz,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: amino acids
TOPOLOGY: lines
                                                                                                                                                            189
                                                                                                                                                                                               215 LYFLLPLLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQT 274
                                                                                                                                                                                                                                                                              158 LVASVLVGVWVKALAMASVPV-LGRVSWEEGAP--SVPPGCSLQWSHSAYCQLFVVVFAV 214
282 ALNPILYATLNRDFRTAYQQLFRC--RPASHNAQETSLRSNSSQLARN 327
                                     335 TSNPFFYGCLNRQIRGELSKQFVCFFKPAPE--EELRLPSREGSIEEN 380
                                                                                                                                                                                                                                                                                                                                                           101 SSALFDHAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLG 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (/UJ)---
TELEX: 24885 OPAT UR
                                                                                                                                                                                                                                                                                                                     75
                                                                                                                                                                                                                                                                                                                                                                                                                                            43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Lavalleye, Jean-Paul REGISTRATION NUMBER: 31,45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Arlington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: OBLON, SPIVAK, McCLELLAND,
                                                                                                                                                                                                                                                                                                                                                                                                     22 SVVLTVLILI---TIAGNVVVCLAVGLNRRLRSLTNCFIVSLAITDLLLGLLVLPF---- 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                        SVALFFMLLLDLTAVAGNAAVMAVIAKTPALRKFV--FVFHLCLVDLLAALTLMPLAMLS 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100;
                                                                                                              TPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCF 334
                                                                                                                                                         VTFYLPLLVMCITYYRIFKIARRIHDQAKHMGSWKAA-----
                                                                                                                                                                                                                                      RVAVSLVLIWVISITLSFLSIHLGWNSRNETSSFNHTIPKCKVQVN-----LVYGLVDGL 188
                                                                                                                                                                                                                                                                                                                   -SAFYQLSCRWSFGKVFCNIYTSLDVMLCTASILNLFMISLDRYCAVTDPLRYPVLITPV 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22202
                                                                            TIGEHKATVTLAAVMGAFIICWFPYFTVFVYRGLKGDDAINEAFEAVVLWLGYANS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1755 Jefferson Davis Highway, Fourth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (703)486-2347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yamada,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tadataka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Recombinant Genomic Clones Encoding Histamine H1, H2, and H3 Receptors, Metl Thereof, and Proteins Encoded Therefrom 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/08/103,170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31,451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07/633,060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; Score 346; DB 2; Pred. No. 1e-19; 55; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2363-017-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MAIER & NEUSTADT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               141; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 359;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Methods
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            For Production
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10;
```

```
Ş
                                                                  S
                                                                                                        망
                                                                                                                                       Ş
                                                                                                                                                                              В
                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                   Ş
                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLONE:
US-08-748-485-5
                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 27.0
Weatches 99; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patent No. 5817480 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-855-0555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM: MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: NOVEL HISTAMINE H2 RECEPTOR NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
ADDRESSEE: INCYTE PHARMACEUTICALS, INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: GOli, Surya K. APPLICANT: Murry, Lynn E. TITLE OF INVENTION: NOVEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MMEDIAL GenUL
LIBRARY: GenUL
TONE: 791239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                           164 VGVWVKALAMASVPVLGRVSWEEGAPSVPPG-----CSLQWSHSAYCQLFVVVFAVLYFL 218
                                                                                                                                                                                                                                                                                      107
339 FFYGCLNRQIRGELSKQFVCFFKPAPEEELRLP---SREGSIEENFLQFLQGTGCPSESW 395
                                                                                                                                                                                                                                                   80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US FILING DATE: Herewith CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OPERATING SYSTEM:
SOFTWARE: FastSEC
                                                                                                                                                                                                                                                                                                                    25 LIILILVTVAGNVVVCLAVGLNRRLRSLTNCFIVSLAVTDLLLGLLVLPF-----SAIYQ 79
                                                                                                                                                                                                                                                                                                                                                     49 MILLDLTAVAGNAAVMAVIAKTPALRKEV--FVFHLCLVDLLAALTLMPLAMLSSSALFD 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Palo Alto
STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                              LSCKWSFSKVFCNIYTSLDVMLCTASILNLFMISLDRYCAVTDPLRYPVLITPARVAISL 139
                                                                                                                                         LPLLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHR
                                                                                                                                                                                                                                                                      HAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVL 163
                                  TIREHKATVTLAAVMGAFIICWFPYFTVFVYRGLKGDDAVNEVFEDVVLWLGYANSALNP
                                                                   TFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNP
                                                                                                                                                                            VFIWVISITLSFLSI--HLGWNSRNETSKDNDTIVKCKVQVN-----EVYGLVDGLVTFY 192
                                                                                                      LPLLIMCITYFRIFKIAREQARRINHIGSWKAA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    94304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   , Application US/08748485
5817480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3174 Porter Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    359 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          415-845-4166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenBank
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Guegler, Karl J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FastSEQ Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Au-Young, Janice
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   single
                                                                                                                                                                                                                                                                                                                                                                                                        14.8%; Score 343; DB 2; 27.0%; Pred. No. 1.7e-19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/08/748,485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                       57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PF-0159 US
                                                                                                                                                                                                                                                                                                                                                                                         Mismatches 146;
                                                                                                                                                                                                                                                                                                                                                                                                                          Length 359,
                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                         64;
                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                     338
                                                                                                                                           278
                                                                                                        225
                                                                                                                                                                                                                                                                                                                                                                                         11;
```

```
Ş
                                                                                                        Ş
                                                                                                                                               Вþ
                                                                                                                                                                               20
                                                                                                                                                                                                                     Вþ
                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                              Qγ
                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Watches 97; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                           ; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-467-568-13
                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-467-568-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 13, Application US/08467568 Patent No. 5817477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 201-994-1744
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Ferraro, Gregory D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION: TELEPHONE: 201-994-1700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: SOPPET, I
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                    281 GGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFF 340
                                                                                                                                               140
                                                                                                                                                                                 164 VGVWVKALAMASVPV-LGRVSWEEGAPS--VPPGCSLQWSHSAYCQLFVVVFAVLYFLLP 220
                                                                                                                                                                                                                                          107 HAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVL 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        335 QEDKPL 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 286
                                                                                                                                                                                                                                                                                            25 LAVLILITVAGNVVVCLAVGLNRRLRNLTNCFIVSLAITDLLLGLLVLPF-----SAIYQ 79
                                                                                                                                                                                                                                                                                                                              49 MLLLDLTAVAGNAAVMAVIAKTPALRKEV--EVEHLCLVDLLAALTLMPLAMLSSSALED 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 36,134
REFERENCE/DOCKET NUMBER: 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: FILING DATE: 06-JUN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: USA
ZIP: 07068-1739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Carella, Byrne, Bain, Gilfillan, Cecchi, ADDRESSEE: Stewart & Olstein
                                                                                                          LLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTF 280
REHKATVTLAAVMGAFIICWFPYFTAFVYRGLRGDDAINEVLEAIVLWLGYANSALNPIL
                                                                                                                                               VLIWVISITLSFLSIHLGWNSRNETSKGNHTTSKCKVQVN-----EVYGLVDGLVTFYLP
                                                                                                                                                                                                                       LSCKWSFGKVFCNIYTSLDVMLCTASILNLFMISLDRYCAVMDPLRYPVLVTPVRVAISL 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -VSRPL 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ILYAALNRDFRTAYHQLFCC--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Roseland
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ferraro, Gregory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  359 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6 Becker Farm Road
                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         06-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              single
                                                                                                                                                                                                                                                                                                                                                                                   14.7%;
28.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DANIEL R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADRENERGIC RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/08/467,568
                                                                                                                                                                                                                                                                                                                                                                  57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 325800-324
                                                                                                                                                                                                                                                                                                                                                                                  Score 340; DB 2
Pred. No. 3e-19;
                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -RLASHNSHETSLRLNNSQ-LNRSQCQEPRW
                                                                                                                                                                                                                                                                                                                                                                                                     DB 2; Length 359;
                                                                                                                                                                                                                                                                                                                                                                    134;
                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                  58;
                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                      227
                                                                                                                                               194
```

ş

341 YGCLNRQIRGELSKQFVCFFKPAPEEELRLPSREG---SIEENFLQ 383

```
Query Match
Best Local Similarity
Thehes 97; Conservi
뭐
                            á
                                                              В
                                                                                           Š
                                                                                                                             밁
                                                                                                                                                          Š
                                                                                                                                                                                              밁
                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 13
US-08-748-485-4
                                                                                                                                                                                                                                                                                                                              US-08-748-485-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 4, Application US/08748485
Patent No. 5817480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                           IMMEDIATE SOURCE:
LIBRARY: GenBa
CLONE: 184088
                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 359 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ Version 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: GOLÍ, SURYA K.
APPLICANT: MUTTY, LYNN E.
TITLE OF INVENTION: NOVEL HISTAMINE H2 RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION: TELEPHONE: 415-855-0555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Au-Young, Janice APPLICANT: Guegler, Karl J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
 195
                                                                                                                                                               107
                                221 LLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTF 280
                                                                                             164 VGVWVKALAMASVPV-LGRVSWEEGAPS--VPPGCSLQWSHSAYCQLFVVVFAVLYFILP 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATY: Palo Alto
                                                                                                                                 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: UPPERILING DATE: Herewith CLASSIFICATION: 530
                                                                                                                                                                                                               25 LAVLILITVAGNVVVCLAVGLNRRLRNLTNCFIVSLAITDLLLGLLVLPF-----SAIYQ 79
                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: 415-845-4166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                              HAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVL 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YAALNRDFRTGYQQLFCC------RLANRNSHKTSLRSNASQ 323
                                                              VLIWVISITLSFLSIHLGWNSRNETSKGNHTTSKCKVQVN-----EVYGLVDGLVTFYLP
                                                                                                                               LSCKWSFGKVFCNIYTSLDVMLCTASILNLFMISLDRYCAVMDPLRYPVLVTPVRVAISL 139
LLIMCITYYRIFKVARDQAKRINHISSWKAA--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94304
                                                                                                                                                                                                                                                                                                                                                                                                                             amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3174 Porter Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                              GenBank
                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INCYTE PHARMACEUTICALS, INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Diskette
                                                                                                                                                                                                                                                                                                                                                                                                            single
                                                                                                                                                                                                                                                                            14.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/08/748,485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       36,749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ۸..
                                                                                                                                                                                                                                                           57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PF-0159 US
                                                                                                                                                                                                                                                           Score 340; DB 2
Pred. No. 3e-19;
7; Mismatches 1
                                                                                                                                                                                                                                                                                            DB 2; Length 359
                                                                                                                                                                                                                                                             134;
                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                               58;
                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                               9;
```

```
밁
                               Ş
                                                                      В
                                                                                                        δõ
                                                                                                                                                 밁
                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 14
US-08-103-170-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                     ; MOLECULE TYPE: protein US-08-103-170-2
                                                                                                                                                                                                                          Query Match
Best Local S
Matches 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 2,
Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: 23
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)521-4500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 24-DEC-1990 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
140 VLIWVISITLSFLSIHLGWNSRNETSKGNHTTSKCKVQVN-----EVYGLVDGLVTFYLP 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  281
                                 164 VGVWVKALAMASVPV-LGRVSWEEGAPS--VPPGCSLQWSHSAYCQLFVVVFAVLYFLLP 220
                                                                                                                                                                                                                        y Match 14.7%; Score 340; DB 2
Local Similarity 28.0%; Pred. No. 3e+19;
hes 97; Conservative 57; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: 1755 Je:
CITY: Arlington
STATE: Virginia
                                                                        80
                                                                                                                                               25 LAVLILITVAGNVVVCLAVGLNRRLRNLTNCFIVSLAITDLLLGLLVLPF-----SAIYQ 79
                                                                                                                                                                                   49 MILLIDLTAVAGNAAVMAVIAKTPALRKEV--FVFHLCLVDLLAALTLMPLAMLSSSALED 106
                                                                                                                                                                                                                                                                                                                                          TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: (703)521-45
TELEFAX: (703)486-2347
TELEX: 24885 OPAT UR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: UZIP: 22202
                                                                                                                                                                                                                                                                                                                                                                         LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                      LSCKWSFGKVFCNIYTSLDVMLCTASILNLFMISLDRYCAVMDPLRYPVLVTPVRVAISL 139
                                                                                              HAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVL 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    YAALNRDFRTGYQQLFCC------RLANRNSHKTSLRSNASQ 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REHKATYTLAAVMGAFIICWFPYFTAFYYRGLRGDDAINEVLEAIVLWLGYANSALNPIL 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YGCLNRQIRGELSKQFVCFFKPAPEEELRLPSREG---SIEENFLQ 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , Application US/08103170 5885824
                                                                                                                                                                                                                                                                                                                                                        amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lavalleye, Jean-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3: P.C.
1755 Jefferson Davis Highway,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gantz,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yamada,
                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OBLON, SPIVAK, McCLELLAND,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tadataka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Recombinant Genomic Clones Encoding
Histamine H1, H2, and H3 Receptors, Methods For Production
Thereof, and Proteins Encoded Therefrom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US 07/633,060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/08/103,170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31,451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2363-017-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MAIER & NEUSTADT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fourth Floor
                                                                                                                                                                                                                          134;
                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                             Length 359;
                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                            9;
```

```
밁
                                 Ş
                                                                          밁
                                                                                                          δÃ
                                                                                                                                                   В
                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                          US-09-030-582-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-030-582-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 13, Application US/09030582
Patent No. 5994506
                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 201-994-1744
INFORMATION FOR SEQ ID NO: 13:
                                                                                                                                                                                                                                                                                                                      TYPE: amino ac
STRANDEDNESS:
TOPOLOGY: lin
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 359 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: SOPPET, DANIEL R
TITLE OF INVENTION: ADRENERG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION: TELEPHONE: 201-994-1700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                       164 VGVWVKALAMASVPV-LGRVSWEEGAPS--VPPGCSLQWSHSAYCQLEVVVFAVLYFLLP 220
                                                                                                                  107
140 VLIWVISITLSFLSIHLGWNSRNETSKGNHTTSKCKVQVN-----EVYGLVDGLVTFYLP 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    288 YAALNRDFRTGYQQLFCC------RLANRNSHKTSLRSNASQ 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      341 YGCLNRQIRGELSKOFVCFFKPAPEEELRLPSREG---SIEENFLQ 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           228 REHKATVTLAAVMGAFIICWFPYFTAFVYRGLRGDDAINEVLEAIVLWLGYANSALNPIL 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             281 GGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFF 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: N.T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Ferraro, Gregory D
REGISTRATION NUMBER: 36,134
REFERENCE/DOCKET NUMBER: 325800-324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARF. Detect-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         221 LLLILVYYCSMFRYARVAAMQHGPLPTWMETPRQRSESLSSRSTMYTSSGAPQTTPHRTF 280
                                                                                                                                                       25
                                                                                                                                                                                      49 MLLLDLTAVAGNAAVMAVIAKTPALRKFV--FVFHLCLVDLLAALTLMPLAMLSSSALFD 106
                                                                                                                                                                                                                        / Match 14.7%; Score 340; DB 2; Length 35
Local Similarity 28.0%; Pred. No. 3e-19;
Nes 97; Conservative 57; Mismatches 134; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: USA
ZIP: 07068-1739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                              HAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVL 163
                                                                                                                                                   LAVLILITVAGNVVVCLAVGLNRRLRNLTNCFIVSLAITDLLLGLLVLPF-----SAIYQ 79
                                                                          LSCKWSFGKVFCNIYTSLDVMLCTASILNLFMISLDRYCAVMDPLRYPVLVTPVRVAISL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LLIMCITYYRIFKVARDQAKRINHISSWKAA------
                                                                                                                                                                                                                                                                                                                                                                                 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6 Becker Farm Road
                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Carella, Byrne, Bain, Gilfillan, Cecchi, Stewart & Olstein
                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                                                                                                                                                                                                             single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADRENERGIC RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/09/030,582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08/467,568
                                                                                                                                                                                                                                                             Length 359
                                                                                                                                                                                                                            58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TT----TI
                                                                                                                                                                                                                          Gaps
                                                                          139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        227
                                                                                                                                                                                                                              9;
```

Search completed: October 21, 2002, 16:09:46 Job time : 19 secs

,					
•					
				•	
	·				
		·			
		·			

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Searched:
        Pred. No. is the number of results predicted by chance to have score greater than or equal to the score of the result being pand is derived by analysis of the total score distribution.
    823
349.5
349
349
340
338.5
338.5
335.5
335.5
335.5
337.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PIR_71:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-838-028-2
2318
1 MESSPIPQSSGNSSTLGRVP.....SDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            October 21, 2002, 16:08:10; Search time 21 Seconds (without alignments) 2063.633 Million cell upd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   283138 seqs, 96089334 residues
    GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pir1:*
pir2:*
pir3:*
pir4:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
      BB
                                                                                                                                                                                                                                     151087

JC1520

JC5520

A39008

JC4120

JH0549

JN0549

JN0549

JN0549

JN0549

JN0565459

A55281

A41679

A55459

A55459

A55459
    GRHUB3
GQRHUB3
A38731
JH0447
JRHUBE
JCRHUBE
JCA121
A40491
A45121
A40491
A50565
JN0765
S65657
A38271
1538271
1538271
1538271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         283138
G protein-
histamine
serotonin
histamine
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Descripti
```

T18863 JN0605 JN0605 DYHUD1 DYHUD1 147219 A47249 A456849 A25886 A25886 C55886 C55886 C55886 C55886 C55886

-adrenergi	-adrenergi -adrenergi n receptor adrenergi	n receptor adrenergic adrenergic	drenergic -adrenergi -adrenergi	radrenergi ytryptamin drenergic drenergic	drenergic drenergic drenergic drenergic		n-coupled e H2 recep n receptor	ion	e a printed,		S 451
Оу 407	Qy 349 Db 357	Qy 289 Db 297	Qy 233 Db 237	Qy 173 Db 177	Qy 113 Db 117	Оу	Qy Db	Query Ma Best Loo Matches	RESULT 1 151087 G protein C. Species C. paces C. paces R. Yasuok Biochim A. Title: A. Title: A. Faces A. Kaces A. Kaces A. Kaces C. Superf C. Superf C. Keyworr		444 544 544 544 544 544 544 544 544 544
						53 DLTAVAG :   : 57 NLIALLA	2 ESSPI ::  : 5 KTSPMIT	atch cal Simi 184;	RESULT 1 I51087 I protein-coupled seven-transmembrane C; Species: Oryzias latipes (Japanese m C; Species: Oryzias latipes (Japanese m C; Date: 13-Sep-1996 #sequence_revision C; Date: 13-Sep-1996 #sequence_revision C; Accession: I51087 R; Yasuoka, A.; Abe, K.; Saigo, K.; Ara Biochim. Biophys. Acta 1235, 467-469, A; Title: Molecular cloning of a fish g A; Reference number: I51087; MUID:95275 A; Accession: I51087 A; Status: preliminary; translated from A; Molecular type: DNA A; Residues: 1-428 < YAS> A; Residues: 1-428 < YAS> A; Coss-references: GB:D43633; NID:999 C; Superfamily: vertebrate rhodopsin C; Keywords: G protein-coupled receptor		277.5 274 274 272 271.5 270.5 270.5
PPAVDFRIPGQIAEE 421	RGELSK-QFVCFFKPAPEE         :   :  RDELVKFRRCCVTQPV	FLLCWLPYF   :    :  FLVCWLPFF	MQHGP-LPT     :   LQQVPAVPT	GRVSWEEGA   : : GWPPYGHQS	FLSVCFVSL   :  :   FLNVFLIWL	NAAVMAVIA         NTGVMVAIA	-PQSSGNSS	õ	seven-tr s latipes 96 #seque 87 K.; Sa Acta 123 r cloning r: 151087 nary; tra DNA S: GB:D43 rtebrate tein-coup		12.0 5 11.8 3 11.7 4 11.7 4 11.7 3
421	PEEEL :EI	SFHLY     YTHAS	WMET-	SIAAS	AILSV :  :: SILTI	KTPAL :     RAPHL	TLG	35.58 42.38	ansme (Jap n (Jap nce_r 190, 5, 46 of a , MUI nslat rhodo		5111 2 387 2 444 2 448 2 384 2 402 2
	RGELSK-QFVCFFKPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPK-QE         :   :   :   :   :   :   :   :	LLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQI   :       :	RVARVAAMQHGP-LPTWMETPRQRSESLSSRSTMVTSSGAPQ-TTPHRTFGGGKAAVV       -	MASVPVLGRVSWEEGAPSVPPGCSLOWSHSAYCQLFVVVFAVLYFLLPLLLILVVYCSME:    :     : :     : :     : :     : : :     : :     : :       : :       : :       : :       : :       : :       : :       : :         : :         : :           : :	VACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALA 172 :  :: :  :  :  :  ::  :	DLTAVAGNAAVMAVIAKTPALRKEVFVFHLCLVDLLAALTLMPLAMLSSSALEDHALEGE:	ESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLL 52 ::  :	35.5%; Score 823; DB 2; Ler 42.3%; Pred. No. 3.6e-59; tive 81; Mismatches 142; 1	RESULT 1  151087  G protein-coupled seven-transmembrane receptor - Japanese medaka C:Species: Oryzias latipes (Japanese medaka) C:Species: Oryzias latipes (Japanese medaka) C:Accession: 151087  R:Casuoka: 13.5ep-1996 #sequence_revision 13-Sep-1996 #text_change 21-Jul-2000 C:Accession: 151087  R:Vasuoka: A.; Abe, K.; Saigo, K.; Arai, S.; Emori, Y. Biochim. Biophys: Acta 1235, 467-469, 1995 A;Title: Molecular cloning of a fish gene encoding a novel seven-transmembr A;Reference number: 151087; MUID:95275927 A;Reference number: 151087; MUID:95275927 A;Status: preliminary: translated from GB/EMBL/DDBJ A;Molecule type: DNA A;Residues: 1-428 <yas> A;Cross-references: GB:D43633; NID:9992581; PIDN:BAA07741.1; PID:g992582 C;Superfamily: vertebrate rhodopsin C;Keywords: G protein-coupled receptor</yas>	ALIGNMENTS	149246 149246 C55886 A47519 JC4629 156595
	SWVSRPLPSPK-QE 406 :   : :   !THPSFANSNPRNME 413	TSNPFFYGCLNRQI 348                    AVNPSFYGLLNRQI 356	TPHRTFCGGKAAVV 288 :           : SPERAFSGGKAALT 296	LPLLLILVVYCSMF 232  :::     ::: APVVVIFSVYSAVY 236	VASVLVGVWVKALA 172    :::   :   VIGVMLLIWFKSLL 176	ILSSSALEDHALFGE 112  - -	VASESVALFFMLLL 52 :     :   OMKDLFGLFCMVTL 56	Length 428; Indels 28; Gaps 11;	RESULT 1  151087  G protein-coupled seven-transmembrane receptor - Japanese medaka C:Species: Oryzias latipes (Japanese medaka) C;Accession: 151087  C;Accession: 151087  R:Yasuoka, A.; Abe, K.; Saigo, K.; Arai, S.; Emori, Y. Biochim. Biophys. Acta 1235, 467-469, 1995 A;Title: Molecular cloning of a fish gene encoding a novel seven-transmembrane recept A;Reference number: 151087; MUID:95275927 A;Status: preliminary; translated from GB/EMBL/DDBJ A;Rosidous: 1-428 <yass a;coss-references:="" c;keywords:="" g="" gb:d43633;="" nid:992581;="" pid:9992582="" pidn:baa07741.1;="" protein-coupled="" receptor<="" td=""><td></td><td>dopamine receptor D4 dopamine receptor dopamine receptor serotonin receptor somatostatin recep neurokinin 2 recep</td></yass>		dopamine receptor D4 dopamine receptor dopamine receptor serotonin receptor somatostatin recep neurokinin 2 recep

β

```
C;Accession: JC5520
R;Kohen, R.; Metcalf, M.A.; Khan, N.; Druck, T.; Huebner, K.; Lachowicz, J.E.;
J. Neurochem. 66, 47-56, 1996
                                                                                                         serotonin receptor 6 - human
N;Alternate names: 5-hydroxytryptamine
C;Species: Homo sapiens (man)
C;Date: 02-Sep-1997 #sequence_revision
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F;22-45/Domain: transmembrane #status predicted <TM1>
F;58-81/Domain: transmembrane #status predicted <TM2>
F;93-113/Domain: transmembrane #status predicted <TM3>
F;136-159/Domain: transmembrane #status predicted <TM4>
F;178-203/Domain: transmembrane #status predicted <TM5>
F;234-260/Domain: transmembrane #status predicted <TM6>
F;234-260/Domain: transmembrane #status predicted <TM6>
F;247-288/Domain: transmembrane #status predicted <TM6>
F;267-288/Domain: transmembrane #status predicted <TM7>
F;4/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Superfamily: vertebrate rhodopsin
C;Keywords: G protein-coupled receptor; glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Molecule type: DNA
A;Residues: 1-358 <RUA>
A;Cross-references: GB:S57565; NID:g236183;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Biochem. Biophys. Res. Commun. 179, 1470-1478, 1991
A;Title: Cloning and tissue expression of a rat histamine H2-receptor A;Reference number: JQ1278; MUID:92028890
A;Accession: JQ1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      histamine H2 receptor - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text_change
  A; Title: Cloning, characterization, and c A; Reference number: JC5520; MUID:96102917
                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RCCession: JQ1278; Ruat, M.; Traiffort, E.; Arrang, J.M.; Leurs, R.; Ruat, M.; Traiffort, E.; Arrang, J.M.; Leurs, R.; Ruat, M.; Traiffort, E.; Arrang, J.M.; Leurs, R.; Ruat, M.; Traiffort, E.; Ruat, M.; Res. Commun. 179, 1470-1478, 1991
                                                                                                                                                                                                                                                                                                   338 PLKLQ---
                                                                                                                                                                                                                                                                                                                                                                                          278
                                                                                                                                                                                                                                                                                                                                                                                                                                    332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         158 LVASVLVGVWVKALAMASVPVLGRVSWEE-----GAPSVPPGCSLQWSHSAYCQLFVVV 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SSALFDHAL----FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SVALFFMLLLDLTAVAGNAAVMAVIAKTPALRKFV--FVFHLCLVDLLAALTLMPLAMLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DGLVTFYLPLLIMCVTYYRIFKIAREQAKRINHISSWKAA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FAVLYFILLPLLLILVVYCSMFRVARVAAMOHGPLPTWMETPRORSESLSSRSTMVTSSGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SVVLTTLILI----TIAGNVVVCLAVSLNRRLRSLTNCFIVSLAATDLLLGLLVLPF----
                                                                                                                                                                                                                                                                                                                                           LQFLQGTGCPSESWVSRPLPSPKQEP
                                                                                                                                                                                                                                                                                                                                                                                        ANSALNPILYAALNRDERTAYQQLEHCKEASHNSHKTSLRLNNSLLPRSQSREGRWQEEK
                                                                                                                                                                                                                                                                                                                                                                                                                                  FCFTSNPFFYGCLNRQIRGELSKQFVCFFKP--APEEELRL------PSREGSIEENF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RVAISLVFIWVISITLSFLSI--HLGWNSRNGTRGGNDTFK--CKVQVN-----EVYGLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -SAIYQLSFTWSFGHVFCNIYTSLDVMLCTASILNLFMISLDRYCAVTDPLRYPVLVTPV 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NQA--HKIPGQIPEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -TIREHKATVTLAAVMGAFIICWFPYFTAFVYRGLRGDDAINEAVEGIVLWLGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15.1%;
llarity 27.5%;
Conservative 5
                                                                                                                                                                                                                                                                                                   ---VWSGTELTHPQGNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 351; DB 2; I
Pred. No. 6.3e-21;
B; Mismatches 150;
                                                                                                                                                                                                                                                                                                   356
                                                                                                                                                                                                                                                                                                                                             407
                                                                                                              05-Sep-1997
                                                                                                                                                        receptor 6
                       chromosomal localization of a human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PIDN:AAB19935.1;
                                                                                                                                                           (5-HTR6)
                                                                                                            #text_change 05-Nov-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Schwartz,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 358;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                phosphoprotein; transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PID:g236184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-Nov-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             74
                         5-HT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12;
                                                                    Meltzer,
                         σ
                         sero
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pro
A; Reference | A; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                    R;Gantz,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N
```

```
R:Gantz, I.; Schaeffer, M.; DelValle, J.; Logsdon, Proc. Natl. Acad. Sci. U.S.A. 88, 429-433, 1991 A;Title: Molecular cloning of a gene encoding the la;Reference number: A39008; MUID:91110543 A;Accession: A39008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F:100-123/Domain: transmembrane #status predicted <TM3>
F:143-166/Domain: transmembrane #status predicted <TM4>
F:145-208/Domain: transmembrane #status predicted <TM5>
F:266-289/Domain: transmembrane #status predicted <TM6>
F:298-321/Domain: transmembrane #status predicted <TM7>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Map position: 1p35-36
A;Introns: 238/3; 2915
C;Superfamily: vertebrate rhodopsin
C;Keywords: G protein-coupled receptor; glycoprotein; neurotransmitter
                                                                                                                                                                                                                                                                                              C;Species: Canis lupus familiaris (dog)
C;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992
C;Accession: A39008; A41821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       F;266-289/Domain: transmembrane #status predicted <TM6>
F;298-321/Domain: transmembrane #status predicted <TM7>
F;10/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F;28-51/Domain: transmembrane #status predicted <TM1>F;65-88/Domain: transmembrane #status predicted <TM2>
                       submitted to the Protein Sequence Database, March 1992
                                                                                                A; Molecule type: DNA
A; Residues: 1-359 <GAN>
A; Cross-references: GB: M32701;
                                                                                                                                                                                                                                                                                                                                                                          RESULT 4
A39008
histamine H2 receptor -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Experimental source: brain C; Comment: This protein shows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Residues: 1-440 <KOH>
A;Cross-references: GB:L41147; NID:g1162923; PIDN:AAA92622.1; PID:g1162924
                                                                      A; Note: the nucleotide sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Accession: JC5520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19 VPQTPGPSTASGVPEVGLRDVASES----VALFFMLLLDLTAVAGNAAVMAVIAKTPALR 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HTR6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FFKPAPEEELRLP-SREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVD 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TWLPFFVANIVQAV-CDCISPGLFD-VLTWLGYCNSTMNPIIYPLFMRDFKRALGR----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CWLPYFSFHLYVALSAQPISTGQVESVYTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PVPGQCRLLASLP-----FVLVASGLTFFLPSGAICFTYCRILLAARKQAVQVASLTTGM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAMQHGPLPTWM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LCLISLDRYLLILSPLRYKLRMTPLRALALVLGAWSLAALASFLPLL--LGWHELGHARP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLGRVSWEE---GAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NTSNFFLVSLFTSDLMVGLVVMPPAML--NALYGRWVLARGLCLLWTAFDVMCCSASILN 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KF--VFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLFLSVCFVSLAILS 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VPE-PGP-TANSTPAWGAGPPSAPGGSGWVAAALCVVIALTA-AANSLLIALICTQPALR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -FLPCP---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ASQASETLQVPRTPRPGVESADSRRLATKHSRKAL-----KASLTLGILLGMFFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----ETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              127;
number:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -RCPRERQASLASPSLRTSHSGPRPGLS-LQQVLPLPL--PPDSD
  A41821
                                                                                                                                                                                                                                                                                                                                                                               dog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15.1%;
30.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 high affinity for several therapeutically important
                                                                                                  NID:g163951; PIDN:AAA85637.1; PID:g163952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              59;
                                                                        described
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 349.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No. 1e-20;
                                                                        'n
                                                                        this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <TM1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              171;
                                                                      paper
                                                                                                                                                                                                                          histamine
                                                                                                                                                                                                                                                                            C.; Campbell,
                                                                                                                                                                                                                                                                                                                        #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 440;
                                                                           nas
                                                                                                                                                                                                                             H2
                                                                           been
                                                                                                                                                                                                                          receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            57;
                                                                                                                                                                                                                                                                                                                             24 - Nov - 1999
                                                                                                                                                                                                                                                                         V.; Uhler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         379
                                                                   revised;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           298
                                                                           the
                                                                                                                                                                                                                                                                            X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18;
                                                                           amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tran
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ant
```

```
F:93-113/Domain: transmembrane #status predicted <TMM>
F:136-157/Domain: transmembrane #status predicted <TMM>
F:137-204/Domain: transmembrane #status predicted <TMM>
F:179-204/Domain: transmembrane #status predicted <TMM>
F:235-236/Domain: transmembrane #status predicted <TMM>
F:269-289/Domain: transmembrane #status predicted <TMM>
F:406-289/Domain: transmembrane #status predicted <TMM>
F:4,162,168/Binding site: carbohydrate (Asn) (covalent) #status predicted F:221,316/Binding site: phosphate (Ser) (covalent) (by protein kinase C) #F:226,357/Binding site: phosphate (Thr) (covalent) (by protein kinase C) #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Title: The guinea pig histamine H2 receptor: gene cloning, tissue expression and chrom A;Reference number: JC4120; MUID:95314628
A;Accession: JC4120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Accession: JC4120
C;Accession: JC4120
R;Traiffort, E.; Vizuete, M.L.; Tardivel-Lacombe, J.;
  B
                                 οy
                                                                                     В
                                                                                                                        ρy
                                                                                                                                                                                                                                                                                                                                                                                                                            C;Superfamily: vertebrate rhodopsin
C;Keywords: glycoprotein; phosphoprotein; receptor; transmembrane
F;22-45/Domain: transmembrane #status predicted <TM1>
F;58-81/Domain: transmembrane #status predicted <TM2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   histamine H2 receptor - guinea pig
C;Species: Cavia porcellus (guinea pig)
C;Date: 27-Aug-1995 #sequence_revision 19-Oct-1995 #text_change 24-Nov-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
JC4120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Molecule type: DNA
A;Residues: 1-359 <GA2>
C;Superfamily: vertebrate rhodopsin
C;Keywords: G protein-coupled receptor; transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C; Comment: Histamine, a messenger molecule in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Residues: 1-359 <TRA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ly defined receptor subtypes named H1, H2 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                            107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  335 TSNPFFYGCLNRQIRGELSKQFVCFFKPAPE--EELRLPSREGSIEEN 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    134 RVAVSLYLIWVISITLSFLSIHLGWNSRNETSSFNHTIPKCKVQVN-----LVYGLVDGL
    80
                                                                                       25
                                                                                                                           49 MLLLDLTAVAGNAAVMAVIAKTPALRKFV--FVFHLCLVDLLAALTLMPLAMLSSSALFD 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         43
                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                        HAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVL 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ALNPILYATLNRDFRTAYQQLFRC - - RPASHNAQETSLRSNSSQLARN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SSALFDHAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SVALFFMLLLDLTAVAGNAAVMAVIAKTPALRKFV--FVFHLCLVDLLAALTLMPLAMLS: 100
LSCKWSFSKVFCNIYTSLDVMLCTASILNLFMISLDRYCAVTDPLRYPVLITPARVAISL
                                                                                  LIILILVTVAGNVVVCLAVGLNRRLRSLTNCFIVSLAVTDLLLGLLVLPF-----SAIYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----TIGEHKATVTLAAVMGAFIICWFPYFTVFVYRGLKGDDAINEAFEAVVLWLGYANS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VTFYLPLLVMCITYYRIFKIARDQAKRIHHMGSWKAA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LYFILPLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LVASVLVGVWVKALAMASVPV-LGRVSWEEGAP--SVPPGCSLQWSHSAYCQLFVVVFAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -SAFYQLSCRWSFGKVFCNIYTSLDVMLCTASILNLFMISLDRYCAVTDPLRYPVLITPV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SVVLTVLILI----TIAGNVVVCLAVGLNRRLRSLTNCFIVSLAITDLLLGLLVLPF----
                                                                                                                                                                                              Similarity
                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                            14.8%; Score 343; 27.0%; Pred. No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15.1%; Score 349;
28.7%; Pred. No. 9.
                                                                                                                                                                        57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               56; Mismatches 140;
                                                                                                                                                                          Mismatches
                                                                                                                                                                                              .8e-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        . 2e-
                                                                                                                                                                                                                DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cell-to-cell H3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2;
                                                                                                                                                                                                                Length 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 359;
                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         communication, affects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  52;
                                                                                                                                                                        64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein
                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            133
                                                                                     79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            74
                                                                                                                                                                                                                                                             #status
                                                                                                                                                                                                                                                        #status predict
                                                                                                                                                                        11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ç,
```

DP OA

107

Š

164

LSCKWSFGKVFCNIYTSLDVMLCTASILNLFMISLDRYCAVMDPLRYPVLVTPVRVAISL 139
VGVWVKALAMASVPV-LGRVSWEEGAPS--VPPGCSLQWSHSAYCQLFVVVFAVLYFLLP 220

HAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVL

```
A:Map position: 5pter-5qter

C:Superfamily: vertebrate rhodopsin
C:Superfamily: vertebrate rhodopsin
C:Keywords: G protein-coupled receptor; transmembrane protein
F:23-44/Domain: transmembrane #status predicted <TM1>
F:58-81/Domain: transmembrane #status predicted <TM2>
F:93-114/Domain: transmembrane #status predicted <TM3>
F:135-159/Domain: transmembrane #status predicted <TM4>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C:Species: Homo sapiens (man)
C;Date: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text_change
C;Accession: JH0449; 152319
R;Gantz, I.; Munzert, G.; Tashiro, T.; Schaeffer, M.; Wang, L.;
Biochem. Biophys. Res. Commun. 178, 1386-1392, 1991
A;Title: Molecular cloning of the human histamine H2 receptor.
A;Reference number: JH0449; MUID:91337087
A;Accession: JH0449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: GB:M64799; NID:g184087; PIDN:AAAS8647.1; R;Nishl, T.; Koike, T.; Oka, T.; Maeda, M.; Futal, M. Biochem. Biophys. Res. Commun. 210, 616-623, 1995
A;Title: Identification of the promoter region of the human h;Reference number: I52319; MUID:95275318
A;Accession: I52319
A;Status: preliminary; translated from GB/EMBL/DDBJ
Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вþ
                                         Ş
                                                                                                                                                                                         F; 235-258/Domain: F; 268-289/Domain:
                                                                                                                                                                                                                                       F; 181-204/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                          A;Gene: GDB:HRH2
A;Cross-references: GDB:391259; OMIM:142703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references: GB:D49783; NID:g728495; PIDN:BAA08618.1; PID:g728496 C;Comment: Histamine is important in the regulation of gastric acid secretary.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: DNA
A; Residues: 1-359 < RES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-359 <GAN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  histamine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JH0449
                                                                                            Query Match
Best Local S
Matches 97
                                                                                                                                                                                       ;268-289/Domain: transmembrane #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              164 VGVWVKALAMASVPVLGRVSWEEGAPSVPPG-----CSLQWSHSAYCQLFVVVFAVLYFL
                                                49
25
                                                                                               Local Similarity es 97; Conser
LAVLILITYAGNVVVCLAVGLNRRLRNLTNCFIVSLAITDLLLGLLVLPF-----SAIYQ 79
                                              MLLLDLTAVAGNAAVMAVTAKTPALRKFV--FVFHLCLVDLLAALTLMPLAMLSSSALFD 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               H2 receptor -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QEDKPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ILYAALNRDFRTAYHQLFCC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FFYGCLNRQIRGELSKQFVCFFKPAPEEELRLP---SREGSIEENFLQFLQGTGCPSESW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VFIWVISITLSFLSI--HLGWNSRNETSKDNDTIVKCKVQVN----EVYGLVDGLVTFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -VSRPL 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TIREHKATVTLAAVMGAFIICWFPYFTVFVYRGLKGDDAVNEVFEDVVLWLGYANSALNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LPLLIMCITYFRIFKIAREQARRINHIGSWKAA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LPLLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHR
                                                                                               Conservative
                                                                                                                                                                                                                                       transmembrane #status predicted
                                                                                                                                                                                                             transmembrane
                                                                                                                  14.7%; Score 340; DB 2; 28.0%; Pred. No. 4.9e-20;
                                                                                               57;
                                                                                                                                                                                                             #status
                                                                                               Mismatches
                                                                                                                                                                                    predicted predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RLASHNSHETSLRLNNSQ-LNRSQCQEPRW
                                                                                                                                                                                         <TM6>
                                                                                                                                                                                                                                     <TM5>
                                                                                                                                      Length 359
                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  histamine H2-receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PID: 9184088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   acid secretion.
                                                                                               58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DelValle, J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24-Nov-1999
                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   225
                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yamada,
```

```
serotonin receptor 6 - rat

N;Alternate names: 5-hydroxytryptamine receptor 6 (5-HTR6)

C;Species: Rattus norvegicus (Norway rat)

C;Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 05-Nov-1999

C;Accession: JN0591

R;Ruat, M.; Traiffort, E.; Arrang, J.M.; Tardivel-Lacombe, J.; Diaz, J.; Leurs, R
Biochem. Biophys. Res. Commun. 193, 268-276, 1993

A;Title: A novel rat serotonin (5-HT6) receptor: molecular cloning, localization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Superfamily: vertebrate rhodopsin
C;Keywords: glycoprotein; neurotransmitter receptor; tl
C;Keywords: glycoprotein; stratus predicted <TM1>
F;29-53/Domain: transmembrane #status predicted <TM2>
F;63-84/Domain: transmembrane #status predicted <TM3>
F;95-122/Domain: transmembrane #status predicted <TM3>
Š
                                   В
                                                            ð
                                                                                                    В
                                                                                                                                    ş
                                                                                                                                                                        밁
                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                              ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             F;141-168/Domain: transmembrane #status predicted <TM4>
F;185-213/Domain: transmembrane #status predicted <TM5>
F;267-293/Domain: transmembrane #status predicted <TM6>
F;297-319/Domain: transmembrane #status predicted <TM7>
F;9/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 1-436 < RUA>
A; Cross-references: GB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Reference number: JN0591; MUID:93277562 A; Accession: JN0591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Introns: 238/3
     342
                                                                                                                                                                         164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     195
                                      265
                                                                      282
                                                                                                        213
                                                                                                                                          233
                                                                                                                                                                                                         180
                                                                                                                                                                                                                                           104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Sim
hes 129;
                                                                                                                                                                                                                                                                                                            46
                                                                                                                                                                                                                                                                                                                                          62 AVMAVIAKTPALRKE--VEVEHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYL 119
                                                                                                                                                                                                                                                                                                                                                                                4
                                                                                                                                                                                                                                                                                                                                                                                                               Ŋ
                                                                                                                                                                                                                                                                                                            LIVLICTOPALRNTSNEELVSLFTSDLMVGLVVMPPAML--NALYGRWVLARGLCLLWT 103
                                                                                                                                                                                                                                                                                                                                                                                                            ESSPIPOSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGNA 61
                                                                                                      LAARKQAVQVASLTTGTAGQALETLQVPRTPRPGMESADSRRLATKHSRKAL------
                                                                                                                                                                                                                                         AFDVMCCSASILNLCLISLDRYLLILSPLRYKLRMTAPRALALILGAWSLAALASFLPLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFF 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTF 280
 GCLNRQIRGELSKQFVCFFKPAPEEELRLP-
                                                                   GGKAAVVLLAVGGOFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFY 341
                                                                                                                                                                      --LGWHELGKARTPAPG------QCRLLASLPFVLVASGVTFFLPSGAICFTYCRIL
                                                                                                                                                                                                       GRVSWEE-GAPSVP-PGCSLOWSHSAYCOL----FVVVFAVLYFLLPLLLILVVYCSMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REHKATVTLAAVMGAFIICWFPYFTAFVYRGLRGDDAINEVLEAIVLWLGYANSALNPIL
                                     -- KASLTLGILLGMEEVTWLPEEVANIAQAV-CDCISPGLED-VLTWLGYCNSTMNPITY
                                                                                                                                        RVARVAAMQHGPLPTWM----
                                                                                                                                                                                                                                                                           FLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVL 179
                                                                                                                                                                                                                                                                                                                                                                                EPGPV-----NSST---PAWGPGPPPAPG------GSGWVAAALCVVIVLTA-AANS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YAALNRDFRTGYQQLFCC------RLANRNSHKTSLRSNASQ 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YGCLNRQIRGELSKQFYCFFKPAPEEELRLPSREG---SIEENFLQ 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LLIMCITYYRIFKVARDQAKRINHISSWKAA-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                             14.6%;
ilarity 28.4%;
Conservative 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GB:S62043;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NID: g385708; PIDN: AAB26908.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 338.5;
Pred. No. 8.
                                                                                                                                    ---ETPRORSESLSSRSTMVTSSGAPQTTPHRTFG
                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                               8.1e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 171;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 436;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PID: 9385709
                                                                                                                                                                                                                                                                                                                                                                                                                                                 97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein
                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
     377
                                                                                                      264
                                                                                                                                                                                                                                           163
                                                                                                                                                                                                                                                                                                                                                                              45
                                                                                                                                        281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     194
                                                                                                                                                                                                                                                                                                                                                                                                                                                 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and st
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sch
                                                                                                    Вþ
                                                                                                                                    δÃ
                                                                                                                                                                                                    ρ
                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                       ρ
                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                            ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                             δÃ
                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                            173
                                                                                                                                                                                                                                                                                                                                                                                 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     321
                                     396 RPFPT
                                                                     398
                                                                                                      347
                                                                                                                                                                         288
                                                                                                                                                                                                                                           229
                                                                                                                                                                                                                                                                           236
                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                         286
                                                                                                                                                                                                                                                                                                                                                                                                                                                 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4
```

```
A;Cross-references: GB:S56481; NID:g298306; PIDN:AAB25520.1; PID:g298307 C;Superfamily: vertebrate rhodopsin C;Keywords: G protein-coupled receptor; transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-400 <BEN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Title: The rat beta3-adrenergic receptor gene contains an intron. A; Reference number: S29808; MUID:93178631 A; Accession: S29808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Note: sequence extracted from NCBI backbone (NCER; Bensaid, M.; Kaghad, M.; Rodriguez, M.; le Fur, FEBS Lett. 318, 223-226, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MR;Granneman, J.G.; Lahners, K.N.; Chaudhry, Mol. Pharmacol. 40, 895-899, 1991
A;Title: Wolecular cloning and expression of A;Reference number: A53281; MUID:92100057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  beta 3-adrenergic receptor - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 02-May-1994 #sequence_revision 18-Nov-1994 #text_change 13-Aug-1999
C;Accession: A53281; S29808
R;Granneman, J.G.; Lahners, K.N.; Chaudhry, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: GB:S73473; NID:g241215; PIDN:AAB20702.1; PID:g241216
A;Note: sequence extracted from NCBI backbone (NCBIN:73473, NCBIP:73476)
R;Bensaid, M.; Kaghad, M.; Rodriguez, M.; le Fur, G.; Caput, D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: DNA
A; Residues: 1-400 < GRA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Accession: A53281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                              181 RVSWEEGAPSVPPGCSLQWSHSAYCQL-----FVVVFAVLYFLLPLLLILVVYCSMFRVA 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 APWPHKNGSLAFWSDAPTLDPSAANTSGLPGV-----PWAAALAGALLALATVGGNLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q-WWRVGADAEAQECH----SNPRCCSFASNMPYALLSSSVSFYLPLLVMLFVYARVFVVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VMAVIAKTPALRKF--VFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SPIPOSSGNSSTLGRVPQ-TPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGNAA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QTP----LQGAPRACSSQPSFCCLERPPGTPRHPP 410
                                                            PDFR-DAFRRLLCSYGGRGPEEPRVVTFPASPVASRQNSPLNRF-
                                                                                                                                                                            LRTLGLIMGIFSLCWLPFFLANVLRALVGPSLVPSGVFIALNWLGYANSAFNPLIY-CRS
                                                                                                                                                                                                                                   AVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLN
                                                                                                                                                                                                                                                                                                KRQRRLLRRELGRFPP-EESPRSPSRSPSPATVGTPTASDGVPSCGRRPARLLPLGEHRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VITAIARTPRLQTITNVFVTSLATADLVVGLLVMPPG--ATLALTGHWPLGATGCELWTS 112
RPLPS
                                                                                                                                                                                                                                                                                                                                                      ----RVAAMQHGPLPTWMETPR--QRSESLSSRSTMVTSSGAPQ--TTPHR--TFGGGKA 285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EENFLQFLQGT--GC---PSESWVSRPLPSPKQEP 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PLEMRDFKRALGRFLPCVHCP-PEHRPALPPPPCGPLTAVPDQASACSRCCLCLCRQTQI 379
                                                                                                                   RQIRGELSKQFVCFFKPAPEEELR-----LPSREGSIEENFLQFLQGTGCPSESWVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120;
   402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 337; DB 2;
Pred. No. 9.7e-20;
65; Mismatches 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    188;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3-adrenergic receptor.
                                                            --DGYEGE----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                      397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   54
                                                               395
                                                                                                                                                                               346
                                                                                                                                                                                                                                                                                                287
                                                                                                                                                                                                                                                                                                                                                                                                                228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17;
```

```
J. Biol. Chem. 266, 24053-24058, 1991
A;Title: An adipose tissue-specific beta-adrenergic rec.
A;Reference number: A41679; MUID:92084710
A;Accession: A41679
A;Molecula ***
                                                                                                           C;Species: Bos primigenius taurus (cattle)
C;Date: 28-Oct-1996 #sequence_revision 13-Mar-1997 #text_change 13-Aug-1999
C;Accession: S65459; S40504; S31659
R;Pietri-Rouxel, F.; Lenzen, G.; Kapoor, A.; Drumare, M.F.; Archimbault, P.;
Eur. J. Biochem. 230, 350-358, 1995
A;Title: Molecular cloning and pharmacological characterization of the bovir A;Reference number: S65459; MUID:95324546
A;Accession: S65459; MUID:95324546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 9
A41579
beta-3-adrenergic receptor - rat
C;Specles: Rattus norvegicus (Norway rat)
C;Sate: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 13-Aug-1999
C;Accession: A41679
C;Accession: A41679
A; Experimental source: brown R; Casteilla, L.; Muzzin, P.; Biochem. J. 297, 93-97, 1994
                A;Cross-references: EMBL:X85961; NID:g757758; PIDN:CAA59937.1; PID:g757759 A;Experimental source: brown adipose tissue R;Casteilla, L.; Muzzin, P.; Revelli, J.P.; Ricquier, D.; Giacobino, J.P.
                                                                          A; Molecule type: mRNA
A; Residues: 1-405 < PIE>
                                                                                                                                                                                                                                                                          RESULT 10
$65459
beta-3-adrenergic receptor - bovine
                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                      δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Experimental source: brown adipose tissue
C;Superfamily: vertebrate rhodopsin
C;Keywords: G protein-coupled receptor; glyv
F;8,26/Binding site: carbohydrate (Asn) (co)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: GB:M74716; NID:g950087;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: mRNA
A; Residues: 1-400 < MUZ>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;Reywords: G protein-coupled receptor; glycoprotein; transmembrane;R-26/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 SPIPQSSGNSSTLGRVPQ-TPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGNAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q-WWRVGADAEAQECH----SNPRCCSFASNMPYALLSSSVSFYLPLLVMLFVYARVFVVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VDVLCVTASIETLCALAVDRYLAVTNPLRYGTLVTKRRARAAVVLVWIVSATVSFAPIMS
                                                                                                                                                                                                                                                                                                                                                                                 RPFPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PDFR-DAFRRLLCSYGGRGPEEPRVVTFPASPVASRQNSPLNRF-----DGYEGE----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ROIRGELSKOFVCFFKPAPEEELR----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KRQRRFVRRELGRFPP-EESPRSPSRSPSPATVGTPTASDGVPSCGRRPARLLPLGEHRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VITAIARTPRLQTITNVFVTSLATADLVVGLLVMPPG--ATLALTGHWPLGATGCELWTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VMAVIAKTPALRKE--VFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APWPHKNGSLAFWSDAPTLDPSAANTSGLPGV----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LRTLGLIMGIFSLCWLPFFLANVLRALVGPSLVPSGVFIALNWLGYANSAFNPLIY-CRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ----RVAAMQHGPLPTWMETPR--QRSESLSSRSTMVTSSGAPQ--TTPHR--TFGGGKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 336;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches 189;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              --LPSREGSIEENFLQFLQGTGCPSESWVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PIDN: AAA74470.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .2e-19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ----PWAAALAGALLALATVGGNLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                             Archimbault, P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PID:g202766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Molecular cloning
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W.R.; Venter,
                                                                                                                                                          the bovine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62
                                                                                                                                                                                                                                                                                                                                                                                                                                                           395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17;
                                                                                                                                                                                           Strosberg,
                                                                                                                                                          beta3-adr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     J.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                dowi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       G.
```

```
R.Stoffel, B.; Meyer, H.H.D. submitted to the EMBL Data Library, June A.Description: Bovine beta3-adrenergic re A.Reference number: S31659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: DNA
A; Residues: 4-5, 'HE', 8-105 <STO>
A; Cross-references: EMBL: X67214
C; Superfamily: vertebrate rhodopsin
C; Keywords: G protein-coupled receptor;
                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        F;293-314/Domain: transmembrane #status F;327-347/Domain: transmembrane #status F;8,26/Binding site: carbohydrate (Asn)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   F;113-133/Domain: transmembrane #status predicted <TM3>F;156-179/Domain: transmembrane #status predicted <TM4>F:106-179/Domain: transmembrane #status predicted <TM5>F:104-205/Domain: transmembrane #status predicted <TM5>F:104-205/Domain: transmembrane #status predicted <TM5>F:104-205/Domain: transmembrane #status predicted <TM5>F:104-205/Domain: transmembrane #status predicted <TM5>F:105-105/Domain: transmembrane #status predicted <TM5-105/Domain: transmembrane #status predicted <TM5-105/Domain: trans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C; Keywords: G protein-coupled receptor; glycoprotein; neurotransmitter receptor; F; 37-63/Domain: transmembrane #status predicted <TM1>F; 73-101/Domain: transmembrane #status predicted <TM2>
망
                                                        Q
                                                                                                                                     В
                                                                                                                                                                                                                                                                   ₽
                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Reference number: A; Accession: S31659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Residues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Status: nucleic acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Reference number: S40503; MUID:94107292
A; Accession: S40504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Title: Expression of beta(1) - and beta(3) -adrenergic-receptor messages
389
                                                                  402
                                                                                                                                     348
                                                                                                                                                                                                    344
                                                                                                                                                                                                                                                                      289
                                                                                                                                                                                                                                                                                                                                     284
                                                                                                                                                                                                                                                                                                                                                                                                        232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7
                                                                                                                                                                                                LNRQIRGELSKQFVCFFKPAPEEELRL--PSREGSIEENFLQFLQGTGCPSESWVSRPLP
AGPMQPPELD
                                                                  SPKQEPPAVD
                                                                                                                                                                                                                                                                                                                                     KAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGC
                                                                                                                                                                                                                                                                                                                                                                                                        TRQLRLLRRELGRFPPEESPPAPSRSGSPGLAGPCASPAGVPSYGRRPARLLPLREH---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         K-WWRIGADAEAQRCH---SNPRCCTFASNMPYALLSSSVSFYLPLLVMLFVYARVFVVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RVSWEEGAPSVPPGCSLQWSHSAYCQL----FVVVFAVLYFILPLLLILVVYCSMFRVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VDVLCVTASIETLCALAVDRYLAVTNPLRYGALVTKRRALAAVVLVWVVSAAVSFAPIMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VIVAIARTPRLQTMTNVFVTSLATADLVVGLLVVPPG--ATLALTGHWPLGVTGCELWTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PWPPGNSS-LTPWPDIPTLAPNTANASGLPGVPW----AVALAGALLALAVLATVGGNLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PQSSGNSSTLGRVPQTP--GPST--ASGVPEVGLRDVASESVALFFMLLLDLTAVAGNAA
                                                                                                                                     RSPDFRSAF-RRLLC--RCRPEEHLAAASPPR---
                                                                                                                                                                                                                                                                      RALRTLGLIMGTFTLCWLPFFVVNVVRALGGPSLVSGPTFLALNWLGYANSAFNPLIY-C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VMAVIAKTPALRKF--VFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       162-298 <CAS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -RVAAMQHGPLPTWMETPR-QRSESLSSRSTMVTSSGAP-----QTTPHRTFGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
398
                                                               411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 335.5; DB 2; Pred. No. 1.3e-19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  shown;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          receptor,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                predicted <TM6>
predicted <TM7>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (covalent) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      compared
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 partial genomic sequence
                                                                                                                                        ----APSGAPTALTSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 405;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  conceptual
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                    401
                                                                                                                                                                                                                                                                                                                                     343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                62
                                                                                                                                                                                                                                                                      347
                                                                                                                                                                                                                                                                                                                                                                                                        288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and adenylat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tran
```

R:Chen, X.; Harden, T.K.; Nicholas, R.A. J. Biol. Chem. 269, 24810-24819, 1994 A;Title: Molecular cloning and characterization

of

þ

novel beta-adrenergic receptor

beta-4C-adrenergic receptor - turkey C;Species: Meleagris gallopavo (common C;Date: 18-Nov-1994 #sequence\_revision

turkey) 18-Nov-1994

#text\_change 13-Aug-1999

RESULT A55044

11

C; Accession: A55044

```
A; Reference number: A55044; MUID
A; Accession: A55044
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-428 CCHE>
A; Cross-references: GB:U13978; N
C; Genetics: 416/2
C; Superfamily: vertebrate rhodop
C; Keywords: neurotransmitter rec
A; Molecule type: mRNA
A; Residues: 1-30, 'G', 32-521, 'P', 523-572
A; Note: the authors translated the codon
C; GenetLos:
A; Gene: GDB: ADRAla; ADRAl; ADRALR
                                                                                                A:Status: preliminary; translated from GB/EMBL/DDBJ
A:Molecule type: DNA
A:Residues: 1-572 < KRES>
A:Cross references: GB:D29952; NID:g914933; PIDN:BAA06222.1; PID:g914934
A:Cross references: GB:D29952; NID:g914933; PIDN:BAA06222.1; PID:g914934
B:Weinberg, D.H.; Trivedi, P.; Tan, C.P.; Mitra, S.; Perkins-Barrow, A.;
Blochem. Biophys. Res. Commun. 201, 1296-1304, 1994
A:Title: Cloning, expression and characterization of human alpha adrener;
A:Reference number: JC2331; MUID:94296402
A:Accession: JC2331
                                                                                                                                                                                                                                                                                   alpha-lA-adrenergic receptor - human C:Species: Homo sapiens (man) C:Date: 06-Sep-1996 #sequence_revision 06-Sep-1996 #text_change 13-Aug-1999 C:Accession: 139369; UC2331
R:Esbenshade, T.A.; Hirasawa, A.; Tsujimoto, G.; Tanaka, T.; Yano, J.; Minne Mol. Pharmacol. 47, 977-985, 1995
A:Title: Cloning of the human alpha 1d-adrenergic receptor and inducible exp. A:Reference number: 139369; MUID:95265059
A:Accession: 139369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
I39369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         374 S 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 T 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLFLSVCFVSLAILSVSAINV 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TPLPAGNGSVPNCSWAAVLSRQWAVGAALSITILVIVAGNLLVIVAIAKTPRLQTMTNVF 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TPGPSTASGVPEVGLRDVASESVALFFMLLLD-LTAVAGNAAVMAVIAKTPALRKF--VF 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PLPTWMETPRORSESLSSRSTMVTSSGAPQTTPHRTFG--GGKAAVVLLAVGGQFLLCWL 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WSHSAYCQL-----RVVVFAVLYFLLPLLLILVVYCSMFRVA------RVAAMQHG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DRYLAITAPLQYEALVTKGRAWAVVCMVWAISAFISFLPIMNH-WWRDGADEQAVRC---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLGRVSWEEGAPSVPPGCSLQ 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VTSLACADLYMGLLVVPPG--ATILLSGHWPYGTVVCELWTSLDVLCVTASIETLCAIAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PFFVANI-IKVFCRPLVPDQLFLFLNWLGYVNSAFNPIIY-CRSPDFRSAFRKLLCC---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFFK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P-----SLSSR-----GGRWRRPSRLLAIKEHKALKTLGIIMGTFTLCWL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YDDPRCCDFVTNMTYAIVSSTVSFYVPLLVMIFVYVRVFAVATRHVQLIGKDKVRFLQEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       al Similarity 27.3
115; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRRADRRLHAAPQDPQHCSC----AFSPRGDPMEDSKAVD---PGHLRED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rhodopsin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MUID: 95014249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       receptor; transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NID:g555881; PIDN:AAA62151.1; PID:g555882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 335; DB 2;
Pred. No. 1.5e-19;
9; Mismatches 179
                                            codon
                                          n ccc
                                            for residue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                            522 as
                                            Arg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       68;
                                                                                                                                            adrenergic
                                                                                                                                                                                                                                                                                                                                                                     J.; Minneman,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  275
                                                                                                                                                                                                                                                                                                                               expression
                                                                                                                                                                                    Borkowski,
                                                                                                                                          receptors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15;
                                                                                                                                                                                                                                                                                                                                                                     K.P.;
                                                                                                                                                                                                                                                                                                                               of
                                                                                                                                                                                    .
:
                                                                                                                                              ø
```

```
F;132-162/Domain: transmembrane *status predicted <TM1>
F;172-197/Domain: transmembrane *status predicted <TM2>
F;172-197/Domain: transmembrane *status predicted <TM3>
F;208-235/Domain: transmembrane *status predicted <TM4>
F;254-278/Domain: transmembrane *status predicted <TM5>
F;344-374/Domain: transmembrane *status predicted <TM6>
F;380-414/Domain: transmembrane *status predicted <TM6>
F;380-414/Domain: transmembrane *status predicted <TM7>
                                                                                                  Qy
                                                                                                                                            Вb
                                                                                                                                                                             οy
                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: GDB:118749;
A;Map position: 20pter-20qter
A;Introns: 37/3
C;Superfamily: vertebrate rhodop
C;Keywords: glycoprotein; neurot
밁
                                Q
                                                                      Вþ
                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           F;89-123/Domain: transmembrane #status predicted F;132-162/Domain: transmembrane #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
 509
                                  428
                                                                      454
                                                                                                          386
                                                                                                                                            403
                                                                                                                                                                                                                    343
                                                                                                                                                                                                                                                       284
                                                                                                                                                                                                                                                                                                                               242
                                                                                                                                                                                                                                                                                                                                                                 238
                                                                                                                                                                                                                                                                                                                                                                                                     189
                                                                                                                                                                                                                                                                                                                                                                                                                                       183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              125
                                                                                                                                                                              342
                                                                                                                                                                                                                                                                                           290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                    PSVPPGCSLQWSHSAYCQL-----FVVVFAVLYFLLPLLLILVVYCSMFRVAR--VAAMQ 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RHLQTVTNYFIVNLAVADLLLSATVLPFS--ATMEVLGFWAFGRAFCDVWAAVDVLCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PALRKFV--FVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLFLSVCFVSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NSSTLGRVPQTPGPSTASGVPEVGLRDVASESVAL-FFMLLLDLTAVAGNAAVMAVIAKT 70
                                                                                                                                                                                                                                                     -- KAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFY
                                                                                                                                                                                                                                                                                                                             HGPLPTWMETPRQRSES-----LSSRSTMVTSSGA--PQTTPHRTFGGG----
                                                                                                                                                                                                                                                                                                                                                                                                                                      SILSLCTISVDRYVGVRHSLKYPAIMTERKAAAILALLWVVALVVSVGPLLG---WKE--
-QLRAKVSSLSHKIRAGGAQRAEA
                                                                                                                                                                              GCLNRQIRGELSKQFVCFFK----
                                                                                                                                                                                                                                                                                                                                                                 -PVPP-----DERFCGITEEAGYAVFSSVCSFYLPMAVIVVMYCRVYVVARSTTRSLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLGRVSWEEGA 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NRSSAGEPGSAGAGGDVNGTAAVGGLVVSAQGVGVGVFLAAFILMAVAGNLLVILSVACN
                                  QQLTSDIIMSDSYLRPAASPRLES
                                                                                                        QGTGCPSESWVSRPLPSPKQEPPAV----
                                                                                                                                            PCSSREFKRAFLRLLRCQCRRRRRRRPLWRVYGHHWRASTSGLRQDCAPSS
                                                                                                                                                                                                                    EKKAAKTLAIVVGVFVLCWFPFFFVLPLGSLFPQLKPSEGVFKVIFWLGYFNSCVNPLIY
                                                                                                                                                                                                                                                                                           AG-----VKRERGKASEVVLRIHCRGAATGADGAHGMRSAKGHTFRSSLSVRLLKFSR
                                                                    -GDAPPGAPLALTALPDPDPEPPGTPEMQAPVASRRKPPSAFREWRLLGPFRRPTT----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 vertebrate rhodopsin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               neurotransmitter receptor; transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OMIM: 104219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred.
531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (Asn) (covalent) #status
                                  451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            332.5; DB 2
No. 3.3e-19;
                                                                                                                                                                                PAPEEELRLPSREGSIEENFLQFL
                                                                                                          -----DFRIPGQIAEETSEFLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         204;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <TM1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                          427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                128
                                                                                                                                            453
                                                                                                                                                                                385
                                                                                                                                                                                                                    402
                                                                                                                                                                                                                                                     341
                                                                                                                                                                                                                                                                                         342
                                                                                                                                                                                                                                                                                                                                                               289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            182
                                                                                                                                                                                                                                                                                                                             283
                                                                                                                                                                                                                                                                                                                                                                                                                                      237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16;
```

```
A; Residues: 1-437 <RES>
A; Cross-references: GB:
C; Superfamily: vertebra
                                                                                                                                                                                  Mol.
                                                                                                                                                                                                                RESULT 13
157942
5-hydroxytryptamine receptor - rat
C:Species: Rattus norvegicus (Norway rat)
C:Date: 02-Aug-1996 #sequence_revision 02
C:Accession: I57942
                                                                                                                        A;Title: Cloning and expression of a novel serotonin A;Reference number: 157942; MUID:93196608 A;Accession: 157942
                                                                                                                                                                                                 R; Monsma, F.J.
                                                                                      A; Molecule type: mRNA
                                                                                                       A; Status: preliminary;
                                                                                                                                                                                  Pharmacol. 43, 320-327, 1993
                                     vertebrate
                                                    GB:L03202; NID:g294507;
                                                                                                          translated from GB/EMBL/DDBJ
                                     rhodopsin
14.28;
Score
                                                                                                                                                                                                                                    02-Aug-1996 #text_change 05-Nov-1999
 329
                                                      PIDN: AAA40618
5.
 DB
                                                                                                                                                               receptor
Length
                                                      j.
                                                    PID:g294508
 437;
                                                                                                                                                               with
                                                                                                                                                               high affinity
                                                                                                                                                               for
```

```
C;Genetics:
A;Map position: 8A2-4
A;Introns: 388/2
A;Introns: 388/2
C;Superfamily: vertebrate rhodopsin
C;Keywords: G protein-coupled receptor; glycoprotein; C;Keywords: Hransmembrane #status predicted <TM1>F;37-60/Domain: transmembrane #status predicted <TM2>F;70-98/Domain: transmembrane #status predicted <TM:
T110-130/Domain: transmembrane #status predicted <TM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           beta-3-adrenergic receptor - mouse
C;Species: Mus musculus (house mouse)
C;Date: 03-reb-1994 #sequence_revision
C;Accession: S32804; S32827; S18548
R;Emorihe, L.J.
submitted to the EMBL Data Library, Mar
A;Reference number: S32803
                                                                                                                                                                                                                                                             A; Title: Molecular characterization of the mouse A; Reference number: S18548; MUID:92037534 A; Accession: S18548
                                                                                                                                                                                                                                                                                                                       A; Molecule type: DNA A; Residues: 1-8;341-347;380-400 <SPR> R; Nahmlas, C.; Blin, N.; Elalouf, J.M.; EMBO J. 10, 3721-3727, 1991
                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: EMBL:X72862; NID:g298112; PIDN:CAA51384.1; PID:g298113 R;van Spronsen, A.; Nahmias, C.; Krief, S.; Briend-Sutren, M.M.; Strosberg, Eur. J. Biochem. 213, 1117-1124, 1993 A;Title: The promoter and intron/exon structure of the human and mouse beta: A;Reference number: S32826; MUID:93279311 A;A;Crossion: S32827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
S32804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            οy
                                                                                                                                                                                                                       A; Molecule type: DNA
A; Residues: 1-388 < NAH>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                      A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Residues: 1-400 <EMO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Accession: S32804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity Matches 128; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      380 DSASGGTSGLQLTAQLLLPGEA--TRDPPPPTRATTVVNFFVTDSVEPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    --KASLTLGILLGMEEVTWLEEEVANIAQAV-CDCISPGLED-VLTWLGYCNSTMNPIIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LAARKQAVQVASLTTGTAGQALETLQVPRTPRPGMESADSRRLATKHSRKAL-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RVARVAAMQHGPLPTWM------ETPRQRSESLSSRSTMVTSSGAPQTTPHRTFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      --LGWHELGKARTPAPG-----QCRLLASLPFVLVASGVTFFLPSGAICFTYCRIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GRVSWEE-GAPSVP-PGCSLQWSHSAYCQL----FVVVVFAVLYFLLPLLLILVVYCSMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVL 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AVMAVIAKTPALRKF--VFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYL 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PLFMRDFKRALGR-FLHASTVPRSTGQPCLPLHVDLSQRCQTRPQLQQVLALPLPPNSDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCLNRQIRGELSKQFV----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AFDVMCCSASILNLCLISLDRYLLILSPLRYKLRMTAPRALALILGAWSLAALASFLPLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LLIVLICTQPAVRNTSNFFLVSLFTSDLMVGLVVMPPAML--NALYGRWVLARGLCLLWT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EPGPV-----NSST---PAWGPGPPPAPG------GSGWVAAALCVVIVLTA-AANS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                      EMBL: X60438;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Library, March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          65;
                                                                                                                                                                                                  NID:g50109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-Feb-1994 #text_change 13-Aug-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No. 4.3e-19;
smatches 181;
                                                                                                                                                                                                                                                                                                                                                Mattei,
                                                                                                                                                                                                      PIDN:CAA42966.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ---CFFKPAPEEELRLP----S
                                                                                                                                                                                                                                                                                                                                            M.G.;
                                                                                                                                                                                                                                                                                                      beta-3-adrenergic
                                                                                                                                                                                                                                                                                                                                            Strosberg, A.D.;
                                                                                                  transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                  human and mouse beta3-adrenergic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           426
                                                                                                                                                                                                  PID:950110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      95;
                                                                                                                                                                                                                                                                                                        receptor: relationsh
                                                                                               protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         45
                                                                                                                                                                                                                                                                                                                                              Emorine,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Emorin
```

```
C;Genetics:
A;Gene: GDB:ADRB3
A;Cross-references:
A;Introns: 402/2
C;Superfamily: vertebrate rhodopsin
C;Keywords: alternative splicing; G
F;1-414/Product: beta-3-adrenergic I
                                                                                                                                                                                                                                                                                                                                                                          R; Emorine, L.J.; Marullo, S.; Briend-Sutrer Science 245, 1118-1121, 1989
A;Title: Molecular characterization of the A; Reference number: A41348; MUID:89368947
A; Accession: A41348
A; Status: nucleic acid sequence not shown A; Molecule type: DNA
A; Residues: 1-402 < EMO>
                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 392-414 <LEL>
A; Cross-references: EMBL:
                                                                                                                                                                                                                                        A; Title: Molecular cloning of a human beta-3-adrenergic A; Reference number: S33751; MUID:93285320 A; Accession: S33752
                                                                                                                                                                                                                                                                                               R:Lelias, J.M.; Kaghad, M.; Rodriguez, M.; Chalon, FEBS Lett. 324, 127-130, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Species: Homo sapiens (man)
C;Date: 22-Jan-1993 #sequence_revision 18-Aug-1995 #text_change 16-Jun-2000
C;Accession: A41348; S33752
C;Accession: A41348; S3752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             F;201-222/Domain: transmembrane #status predicted <TM5>F;290-311/Domain: transmembrane #status predicted <TM6>F;324-344/Domain: transmembrane #status predicted <TM7>F;324-344/Domain: transmembrane #status predicted <TM7>F;8,26/Binding site: carbohydrate (Asn) (covalent) #status
                                                                               A; Map position:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N;Contains: beta-3-adrenergic receptor
C;Species: Homo sapiens (man)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N; Alternate names: beta-3-adrenergic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ω
                                                                                                                                                              A; Note: splice
                                                                                                                                                                                                                                                                                                                                   A; Note: splice form 1
                                                                                                                                                                                                                                                                                                                                                          A; Cross-references: GB:M29932; NID:g178895;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QRHUB3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    beta-3-adrenergic receptor, splice form 2 - human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 SPIPQSSGNSSTLGRVPQ-TPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGNAA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VIIAIARTPRLQTITNVFVTSLAAADLVVGLLVMPPG--ATLALTGHWPLGETGCELWTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NPVIY-CRSPDFRDAFRRLLCSYGGRGPEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NPFFYGCLNRQIRGELSKQFVCFFKPAPEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q-WWRVGADAEAQECH----SNPRCCSFASNMPYALLSSSVSFYLPLLVMLFVYARVFVVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VDVLCVTASIETLCALAVDRYLAVTNPLRYGTLVTKRRARAAVVLVWIVSAAVSFAPIMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VMAVIAKTPALRKF--VFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LREH----RALRTLGLIMGIFSLCWLPFFLANVLRALAGPSLVPSGVFIALNWLGYANSAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KRQRHLLRRELGRFSPEESPPSPS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RVSWEEGAPSVPPGCSLQWSHSAYCQL----FVVVFAVLYFLLPLLLILVVYCSMFRVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APWPHRNGSLALWSDAPTLDPSAANTSGLPGV----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         107;
                                                                               es: GDB:203869; OMIM:109691
8p12-8p11.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                            EMBL: X70812;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -RVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAP-----QTTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14.18;
27.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S.; Briend-Sutren,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61;
                                                                                                                                                                               NID:g312398;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 326.5;
Pred. No. 6.
  protein-coupled receptor; glycoprotein; receptor precursor splice form 2 *status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              splice
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RSPSPATGGTPAAPDGVPPCGRRPARLLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human
                                                                                                                                                                                                                                                                                                                                                          PIDN: AAA35550.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ጃ
.
.
                                                                                                                                                                               PIDN:CAA50142.1; PID:g1666375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .9e-19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ---PWAAALAGALLALATVGGNLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            beta-3-adrenergic receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Patey,
                                                                                                                                                                                                                                                                                                                     P.; Bonnin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                              receptor cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   predicted
                                                                                                                                                                                                                                                                                                                                                          PID: g178896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tate,
                                                                                                                                                                                                                                                                                                                   J.; Dupre,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                K.; Delavier-Klut
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            54
                                                                                                                                                                                                                                                                                                                     .
:
  predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12;
                                                                                                                                                                                                                                                                                                                     Delpech
```

```
F:1-402/Product: beta-3-adrenergic receptor precursor splice form 1 #status predicted F:37-63/Domain: transmembrane #status predicted <TM1> F:73-101/Domain: transmembrane #status predicted <TM2> F:113-133/Domain: transmembrane #status predicted <TM3> F:165-178/Domain: transmembrane #status predicted <TM4> F:156-178/Domain: transmembrane #status predicted <TM4> F:204-225/Domain: transmembrane #status predicted <TM5> F:203-314/Domain: transmembrane #status predicted <TM6> F:203-314/Domain: transmembrane #status predicted <TM6> F:327-347/Domain: transmembrane #status predicted <TM6> F:3
                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20
Search completed: October 21, 2002, 16:08:41 Job time : 23 secs
                                                                                                                                                                  뭥
                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           F;8,26/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 14.0%;
Best Local Similarity 28.7%;
Matches 125; Conservative 6
                                                                                                                                                                  403
                                                                                                                                                                                                                                                                                                                                     345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         388 -TGCPSESWVSRPLP 401
                                                                                                                                                                                                                                                                                                                                                                                                             340 FYGCLNRQIRGELSKQFVC----FFKPAPEEELR---LPS-----REGSIEENFLQFLQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  280 FGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPF 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     229 VVATRQLRLLRGELGRFPP-EESPPAPSRSLAPAPVGTCAPPEGVPACGRRPARLLPLRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               173 IMSQ-WWRVGADAEAQRCH---SNPRCCAFASNMPYVLLSSSVSFYLPLLVMLFVYARVF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  118 YLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVP 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 SPIPOSSGNSSTLGRVPQTP--GPSTA--SGVPEVGLRDVASESVALFFMLLLDLTAVAG 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VLGRVSWEEGAPSVPPGCSLQWSHSAYCQL-----FVVVFAVLYFLLPLLLILVVYCSMF 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   H---RALCTLGLIMGTFTLCWLPFFLANVLRALGGPSLVPGPAFLALNWLGYANSAFNPL 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RVA----RVAAMQHGPLPTWMETPRORSESLSSR--STMVTSSGAP-------QTTPHRT 279
                                                                                                                                                                  FDSCGGEN----PLP
                                                                                                                                                                                                                                                                                                                                IY-CRSPDFRSAF-RRLLCRCGRRLPPEPCAAARPALFPSGVPAARSSPAQPRLCQRLDG 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NLLVIVAIAWTPRLQTMTNVFVTSLAAADLVMGLLVVPPA--ATLALTGHWPLGATGCEL 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APWPH---ENSSLAPWPDLPTLAPNTANTSGLPGVPW----EAALAGALLALAVLATVGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 324; DB 1; Length 414; Pred. No. 1.1e-18; Mismatches 187; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                  387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21;
```

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  on:
      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
DB
    823
349.51
349.51
349.51
349.51
349.34
349.34
349.34
349.34
349.34
349.35
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.5
337.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             October 21, 2002, 16:08:11; Search time 14 Seconds (without alignments) 1247.323 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-838-028-2
2318
1 MESSPIPQSSGNSSTLGRVP.....SDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               105224 seqs, 38719550 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gapop 10.0 , Gapext 0.5
  SwissProt_40:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
    DB
                                                                                                          GPRX_ORYLA
HH2R_RAT
5H6_HUMAN
HH2R_CANFA
HH2R_MOUSE
A1AD_RABIT
5H6_MOUSE
HH2R_HUMAN
5H6_RAT
B3AR_BOVI
A1AD_RAT
B4AR_MEIGA
A1AD_HUMAN
B3AR_GAPHI
B3AR_GAPHI
B3AR_SACMU
B3AR_SHEEP
A1AD_MOUSE
B3AR_SHEEP
A1AD_MOUSE
B3AR_SHEEP
A1AD_MOUSE
B3AR_SHEEP
A1AD_MOUSE
B3AR_CAPHI
B3AR_GAPHI
B3AR_GAPHI
B3AR_GAPHI
B3AR_GAPHI
B3AR_CANFA
A1AB_HUMAN
B3AR_CANFA
A1AB_HUMAN
B3AR_CANFA
A1AB_HUMAN
B3AR_CANFA
A1AB_HUMAN
B3AR_CANFA
A1AB_HUMAN
                    A1AA_CAVPO
A1AA_HUMAN
DOP2_DROME
A1AA_RABIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     105224
P25967
Q28524
Q9x554
Q9t54
Q9t54
Q97158
P3945
Q93127
Q60462
P35368
P3536
                                                                                                                                                                                                                                                                                                                                                                                                       O02666
Q9r1c8
Q9r1c747
P25021
P31388
P26255
P46626
P23944
P43141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q91178 oryzias
P25102 rattus r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P97292 mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Description
                                                                                                                                                                                                                                                                                   4 rattus norv
1 meleagris g
0 homo sapien
2 mus musculu
7 capra hircu
4 macaca mula
4 felis silve
8 ovis aries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7 cavia porce
1 homo sapien
8 rattus norv
5 rattus norv
6 bos taurus
                                                                                                                                                                           4 mus musculu
5 homo sapien
7 balanus amp
3 cavia porce
canis famil
                                                                                   B homo sapien
1 mesocricetu
3 rattus norv
5 cavia porce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   homo sapien
canis famil
                                         homo sapien
drosophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       oryctolagus
  mus musculu
                       oryctolagus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rattus norv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 1
GPRX_ORYLA
ID GPRX_ORYLA
AC Q91178;
DT 01-NOV-1997
DT 01-NOV-1997
1
NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Rel. 35, Created)
(Rel. 35, Last sequence update)
428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
```

293.5 12.7 478 1 OPNA_HUMAN 292 12.6 466 1 AJAA_RAT 291.5 12.6 388 1 5H4_HUMAN 291 12.6 470 1 AJAA_ORYLA 290.5 12.5 501 1 YQNJ_CAEEL 290 12.5 466 1 AJAA_BOYIN 289.5 12.5 388 1 SSR4_HUMAN 289 12.5 388 1 SSR4_HUMAN 289 12.5 446 1 DADR_MACMU 286.5 12.4 452 1 AZAA_BOYIN 286.5 12.4 388 1 SH4_DAOME 285.5 12.3 564 1 5HTI_DROME 285.5 12.3 564 1 DADR_HUMAN
478 388 470 501 1 388 1 448 1 448 1 448 1 446 1
<u>سر سر سر</u>
1 OPN4_HUMAN 1 ALAA_RAT 1 544_HUMAN 1 ALAA_ORYLA 1 YQNJ_CAEEL 1 YQNJ_CAEEL 1 YQMAN 1 SSR4_HUMAN 1 DADR_MACMU 1 DADR_MACMU 1 544_CAVPO 1 54T1_DROME 1 DADR_HUMAN
OPN4_HUMAN AlaA_HUMAN AlaA_ORYLA YQNJ_CAEEL AlaA_BOVIN SSR4_HUMAN DADR_MACMU 544_CAPO 5141_DROME DADR_HUMAN

## ALIGNMENTS

PRT;

428 ₹

E.1.	FT	FT	ΡŢ	FΤ	ŦŢ	FT	FΤ	FT	ГЭ	FT	FT	FT	FT	FT	XW	DR:	DR.	ב מ	DR	DR	DR	င္ပ	င္ပ	င္ပ	റ്റ	cc	ဌ	ဂ	റ്റ	င္ပ	ဂ	ဂ	RL	RT	RT	R.	RA:	RX:	R :	RN	ox c	8	8	8	8	SO	DE	DT	
CARBOHYD 18 NON_TER 428			TRANSMEM 294	DOMAIN 232	X		M		EM	DOMAIN 115	TRANSMEM 94	DOMAIN 68	TRANSMEM 47	DOMAIN 1	G-protein coupled	PROSITE: PS50262:	PROSITE: PS00237:	Pfam: PF00001: 7tm 1: 1	InterPro: IPR0002	GCRDb: GCR 1566;	EMBL; D43633; BAA07741.1; -		or send an email to	entities requires	modified and this	use by non-prof	the European Bioi	between the Swis	This SWISS-PROT e		-!- SIMILARITY: B	-1- SUBCELLULAR L	Biochim. Biophys.	histamine, and se	seven-transmembra	"Molecular clonin	Yasııoka A. Ahe K	MEDI.INE 95275927	SECTION EROM N A	[1]	NCBI TaxID=8090:	Beloniformes: Adr	Acanthomorpha; Ac	Actinoptervaii: N	Eukaryota, Metazo	Oryzias latipes (Medaka fish).	Probable G protei	01-NOV-1997 (Rel. 35, Last	OF 1104 +001 (1101)
18 N-LINKED (GLCNAC) (POTENTIAL). 428	POLY-SER.	EXTRACELLULAR	6 (POTENTIAL			면	4 (POTENTIAL	Q	<pre>3 (POTENTIAL).</pre>	120 EXTRACELLULAR (POTENTIAL).	2 (POTENTIAL).	93 CYTOPLASMIC (POTENTIAL).	1 (POTENTIAL)	46 EXTRACELLULAR			PROSITE: PS0037: G PROTEIN RECEP F1 1: 1	The 1: 1	InterPro: IPR000276: GPCR Rhodpsn.		A07741.1;		to license@isb-sib.ch).	http://www.i:		as its content is in no	informatics Institute. There are no restrictions on its	between the Swiss Institute of Bioinformatics and the EMBL outstation -	entry is copyright. It is produced through a collaborati		SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.	SUBCELLULAR LOCATION: Integral membrane protein.	Biochim. Biophys. Acta 1235:467-469(1995).	histamine, and serotonin receptors.";		"Molecular cloning of a fish gene encoding a novel	K. Saigo K. Arai S. Emori V.:	MEDI.T.NET-405075027: DibMod=7755357.	P			Beloniformes: Adrianichthyidae: Orvziinae: Orvzias	Acanthomorpha; Acanthopteryqii; Percomorpha; Atherinomorpha;	Actinoptervaii: Neoptervaii: Teleostei: Euteleostei: Neoteleostei:	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	(Medaka fish).	Probable G protein-coupled receptor (Fragment).	annotat	oo, mast sedaciiet abaate)

```
HH2R_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ş
    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          믕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                       HH2R_RAT
P25102;
01-MAY-1992
01-MAY-1992
16-OCT-2001
                       modified and this statement is not removentitles requires a license agreement (Some send an email to license@isb-sib.ch).
                                                                                                                            RUBT M., Traiffort E., Arrang J.-M., Leurs R., Schwartz J.-C.;

"Cloning and tissue expression of a rat histamine H2-receptor gene.

Biochem. Blophys. Res. Commun. 179:1470-1478(1991).

-I- FUNCTION: THE H2 SUBCLASS OF HISTAMINE RECEPTORS MEDIATES GASTH
ACID SECRETION. THE ACTIVITY OF THIS RECEPTOR IS MEDIATED BY G
PROTEINS WHICH ACTIVATE ADENYLYL CYCLASE.

-I- SUBCELLULAR LOCATION: Integral membrane protein.

-I- SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.
                                                               This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Entropean Bioinformatics Institute. There are no restructe by non-profit institutions as long as its content
                                                                                                                                                                                                                SEQUENCE FROM N.A.
MEDLINE=92028899; PubMed=1930188;
Ruat M., Traiffort E., Arrang J.-M., Leurs R.,
                                                                                                                                                                                                                                                                        Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalla; Eutherla; Rodentia;
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                            Histamine H2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Մ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LECQVYIFLNVFLIMLSILTITAISVERYFYIVHPMRYEVKMTINLVIGVMLLIMFKSLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RGELSK-QFYCFFKPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWYSRPLPSPK-QE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MASVPVLGRVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLDLLLILVVYCSMF: | | : | : | | | :::: | | | ::::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALA 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DLTAVAGNAAVMAVIAKTPALRKEVEVEHLCLVDLLAALTLMPLAMLSSSALEDHALEGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ESSPI----PQSSGNSST---LGRVPQTPGPSTASGVPEVGL----RDVASESVALFFMLLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NQA--HKIPGQIPEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PPAVDFRIPGQIAEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LAFIVGQFLVCWLPFFIFHLQMSLTGSMKSPGDLEEAVNWLAYSSFAVNPSFYGLLNRQI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KVARSAALQQVPAVPTWADASPAKDRSDSINSQTTIITTRTLPQRLSPERAFSGGKAALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LALVTLFGWPPYGHQSSIAASHCSLHASHSRLRGVFAVLFCVICFLAPVVVIFSVYSAVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KTSPMITSDHSISNESTGLEGPHPTVP-----PDVGVVTSSQSQMKDLEGLECMVTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RDELVKFRRCCVTQPV---EIGPSSLEGSFQENFLQFIQRTSSSSETHPSFANSNPRNME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RVARVAAMQHGP-LPTWMET--PRQRSESLSSRSTMVTSSGAPQ-TTPHRTFGGGKAAVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NLIALLANTGVMVAIARAPHLKKFAFVCHLCAVDVLCAILLMPLGIISSSPFFGTVVFTI
  S57565;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  428
                                                                                                                                                                                                                                                                                                                                         (Rel. 22, Created)
(Rel. 22, Last sequence update)
(Rel. 40, Last annotation updat
2 receptor (H2R) (Gastric recept
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
    AAB19935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ã
                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                    Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  47259 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        35.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 823; DB 1;
Pred. No. 1.1e-44;
                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B749E8765B58A38F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches 142;
                                 removed. Usage by and for commercial ent (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                         n update)
receptor
                                                                                                                                                                                                                                                                                                                                                                                                          358
                                                                                                                                                                                                                                                                                                                                                                                                          Å
                                                                                                                                                                                                                                                                                                                                           IJ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 428;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                             restrictions
                                                                                          EMBL
                                                                 S
                                                                                          a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28;
                                                                                                                                                                        GASTRIC
BY G
                                                                                         outstation
                                                                                                                                                                                                            gene.";
                                                    commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      176
                                                                           on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11;
RESULT 3
516_HUMAN S
ID 516_HUMAN S
AC P50406; 013640;
DT 01-CCT-1996 (Rel
DT 01-CCT-1996 (Rel
                                                                                                        B
                                                                                                                               δÃ
                                                                                                                                                         В
                                                                                                                                                                                Qy
                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                       Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Sin
Matches 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
DISULFID
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCRDb; GCR_0308: -.
InterPro; IPRO001; GPCR_Rhodpsn.
Pfam; PF00001; 7tm_1; 1.
PRINTS; PR00237; GPCRRHODDPSN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        G-protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.
PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PIR; JQ1278; JQ1278.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FRANSMEM
                                                                                                                                                                                    332
                                                                                                        338
                                                                                                                                382
                                                                                                                                                          278
                                                                                                                                                                                                            225
                                                                                                                                                                                                                                      272
                                                                                                                                                                                                                                                               185
                                                                                                                                                                                                                                                                                                                  134
                                                                                                                                                                                                                                                                                                                                           158
                                                                                                                                                                                                                                                                                                                                                                                             101
                                                                                                                                                                                                                                                                                                                                                                                                                                               43
                                                                                                                                                                                                                                                                                                                                                                    75
                                                                                                                                                                                                                                                                                                                                                                                                                       22
                                                                                                       PLKLQ-----VWSGTELTHPQGNP
                                                                                                                                LQFLQGTGCPSESWVSRPLPSPKQEP
                                                                                                                                                                                                                                                             DGLVTFYLPLLIMCVTYYRIFKIAREQAKRINHISSWKAA---
                                                                                                                                                                                                                                                                                       FAVLYFLLPLLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGA
                                                                                                                                                                                                                                                                                                                                         LVASVLVGVWVKALAMASVPVLGRVSWEE-----GAPSVPPGCSLQWSHSAYCQLFVVV
                                                                                                                                                                                                                                                                                                                                                                                 SSALFDHAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERRYYVVHPMRYEVRMTLG
                                                                                                                                                                                                                                                                                                                                                                                                                                               SVALFFMLLLDLTAVAGNAAVMAVIAKTPALRKEV--FVFHLCLVDLLAALTLMPLAMLS
                                                                                                                                                          ANSALNPILYAALNRDFRTAYQQLFHCKFASHNSHKTSLRLNNSLLPRSQSREGRWQEEK
                                                                                                                                                                                   FCFTSNPFFYGCLNRQIRGELSKQFVCFFKP--APEEELRL---
                                                                                                                                                                                                                                                                                                                 RVAISLVFIWVISITLSFLSI--HLGWNSRNGTRGGNDTFK--CKVQVN-----EVYGLV
                                                                                                                                                                                                                                                                                                                                                                                                                       SVVLTTLILI - - - TIAGNVVVCLAVSLNRRLRSLTNCFIVSLAATDLLLGLLVLPF - - - -
                                                                                                                                                                                                                          PQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGY
                                                                                                                                                                                                                                                                                                                                                                   -SAIYQLSFTWSFGHVFCNIYTSLDVMLCTASILNLFMISLDRYCAVTDPLRYPVLVTPV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        coupled receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            358
(Rel.
                                                                                                                                                                                                           -TIREHKATVTLAAVMGAFIICWFPYFTAFVYRGLRGDDAINEAVEGIVLWLGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23
45
82
93
115
115
116
1180
204
234
234
289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ĀΑ;
                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            40253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15.1%;
27.5%;
             Created)
 Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         58;
sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7 (POTENTIAL).
CYTOPLASMIC (POTENTIAL).
ESSENTIAL FOR HISTAMINE B
SIMILABITY).
ESSENTIAL FOR TIOTIDINE B
IMPLICATED IN HISTAMINE B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 (POTENTIAL).
EXTRACELLULAR
5 (POTENTIAL).
CYTOPLASMIC (PO
6 (POTENTIAL).
EXTRACELLULAR
7 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CYTOPLASMIC (PO
2 (POTENTIAL)
EXTRACELLULAR
3 (POTENTIAL)
CYTOPLASMIC (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Transmembrane; Glycoprotein.
EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 351; DB 1;
Pred. No. 2.4e-15;
8; Mismatches 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-LINKED (GLCNAC. .
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IMPLICATED IN HISTAMINE BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIMILARITY |
                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4889F69B7B5D5DDC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (POTENTIAL)
                                                                                                                                407
                                        440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         150;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (POTENTIAL)
```

Length 358;

Indels

Gaps

12;

100

74

---PSREGSIEENF

381

277

224 271 184 211 133 157 .) (POTENTIAL)

(BY

BINDING BINDING

AND (BY

(BY

```
Query Match
                                  DISULFID CONFLICT
                                                                                                                                                                                                                                                     PROSITE; PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Expression of serotonin receptor mRNAs in blood FEBS Lett. 370:215-221(1995).
                                                                                                                                                                                                                                                                                                                                                                              the European Bioinformatics Institute. The use by non-profit institutions as lower modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=96102917; PubMed=8522988; Kohen R., Metcalf M.A., Khan N., Druck T., Sibley D.R., Roth B., Hamblin M.W.;
                       SEQUENCE
                                                                                                                                                                                    TRANSMEM
                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                             Multigene
                                                                                                                                                                                                                                            G-protein
                                                                                                                                                                                                                                                                            PRINTS; PR01102; 5HT6RECEPTR.
                                                                                                                                                                                                                                                                                       Pfam; PF00001;
                                                                                                                                                                                                                                                                                                                                    GCRDb; GCR_1062;
                                                                                                                                                                                                                                                                                                                                               EMBL; L41147; AAA92622.1; -. EMBL; Z49119; CAA88929.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <del>:</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=95385798; PubMed=7656980;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5-HT6 serotonin receptor.";
J. Neurochem. 66:47-56(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5-hydroxytryptamine 6
                                                                   TRANSMEM
                                                                                          TRANSMEM
                                                                                                      DOMAIN
                                                                                                                 TRANSMEM
                                                                                                                             DOMAIN
                                                                                                                                                  DOMAIN
                                                                                                                                                              TRANSMEM
                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                          TRANSMEM
                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                InterPro; IPR000276; GPCR_Rhodpsn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HOMO
                                                                                                                                       TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Cloning, characterization, and chromosomal localization 5-HT6 serotonin recentor.":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16-OCT-2001 (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5-HYDROXYTRYPTAMINE (SEROTONIN), A BIOGENIC HORMONE THAT FUNCTIONS AS A NEUROTRANSMITTER, A HORMONE, AND A MITOGEN. THE ACTIVITY OF THIS RECEPTOR IS MEDICALED BY G PROTEINS THIMULATES ADENVLATE CYCLASE, IT HAS A HIGH AFFINITY FOR TRICYCLIC PSYCHOTROPIC DRUGS. SUBCELLULAR LOCATION: Integral membrane protein.

TISSUE SPECIFICITY: EXPRESSED IN SEVERAL HUMAN BRAIN REGIONS, MOST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FUNCTION: THIS IS ONE OF THE SEVERAL DIFFERENT RECEPTORS FOR 5-HYDROXYTRYPTAMINE (SEROTONIN), A BIOGENIC HORMONE THAT FUNCTIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                      SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROMINENTLY IN THE CAUDATE NUCLEUS.
                                                                                                                                                                                                                                                                                                            601109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens
                                                                                                                                                                                                                                                                                                                         GCR_1885; -.
                                                                                                                                                                                                                                                      PS50262;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OF 215-280 FROM N.A.
                                                                                                                                                                                                                                                                PS00237;
                                                                                                                                                                                                                                family.
                                                                                                                                                                                                                                            coupled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S (Human).
                       440
                                            35
58
65
101
123
145
145
167
167
296
296
321
321
321
                                                                                                                                                                                                                                                                                    7tm_1;
                       ξ
                                                                                                                                                                                                                                                    G_PROTEIN_RECEP_F1_1;
G_PROTEIN_RECEP_F1_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40,
                                                                                                                                                                                                                                          receptor;
                                  46954
 15.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last annotation update)
receptor (5-HT-6) (Serotonin receptor)
                       ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               111111111
                                                                                                                                                                                                                                         Transmembrane;
                                  CYTOPLASMIC ()
BY SIMILARITY
V -> M (IN RE)
 Score 349.5;
                                                                  EXTRACELLULAR (POTENTIAL) 7 (POTENTIAL).
                                                                                          CYTOPLASMIC
6 (POTENTIAL
                                                                                                                                                 CYTOPLASMIC
                                                                                                                                                                        EXTRACELLULAR
                                                                                                                                                                                    CYTOPLASMIC
2 (POTENTIAL
                                                                                                                          EXTRACELLULAR
                                                                                                                                                                                                                 EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                     C888F47650C1D2EF
                                                                                         (POTENTIAL)
                                                                                                                                                            (POTENTIAL)
                                                                                                                                                                                  (POTENTIAL)
                                                                                                                (POTENTIAL)
                                                                                                                                       (POTENTIAL)
                                                                                                                                                                                                         (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                           (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                               There are no restrictions in as its content is in
                                  REF.
                                                                                                                                                                                            (POTENTIAL).
                                                                                                  (POTENTIAL).
                                                                                                                                                (POTENTIAL).
                                                      (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hominidae;
                                                                                                                         (POTENTIAL).
                                                                                                                                                                     (POTENTIAL)
                                                                                                                                                                                                                                        Glycoprotein;
DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Huebner
                                                                                                                                                                                                                                                                                                                                                                                                        Usage
<u>س</u>
٠٠
                      CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       vessels.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ×.
                                                                                                                                                                                                                                                                                                                                                                                                        bу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lachowicz
                                                                                                                                                                                                                                                                                                                                                                                                        and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a human
                                                                                                                                                                                                                                                                                                                                                                                                        for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOST
                                                                                                                                                                                                                                                                                                                                                                                                                 9 G
```

Length 440;

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 4
HH2R_CANFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 127; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                               P17124;
01-AUG-1990 (Rel. 1
01-AUG-1990 (Rel. 1
16-OCT-2001 (Rel. 4
                                                                                                   J. Biol. Chem. 267:20840-20843(1992).

-i- FUNCTION: THE H2 SUBCLASS OF HISTAMINE RECEPTOR IS ACID SECRETION. THE ACTIVITY OF THIS RECEPTOR IS PROTEINS WHICH ACTIVATE ADENYLYL CYCLASE.

-i- SUBCELLULAR LOCATION: Integral membrane protein.

-i- TISSUE SPECIFICITY: GASTRIC FUNDUS AND, TO A LESS
                                                   This
                                                                                                                                                                                                                                                                Proc.
                         the European Bioinformatics Institute.
                                                                                                                                                                                                            Gantz I., DelValle
Konda Y., Yamada T.
                                                                                                                                                                                                                                                                                                     Gantz I., Schaeffer M.,
Uhler M., Yamada T.;
                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                            Canis familiaris (Dog).
                                                                                                                                                                                                                                                                                                                                                                                                                                      Histamine H2 receptor
                                       between
                                                                                                                                                                               "Molecular basis for the interaction of histamine with H2 receptor.";
                                                                                                                                                                                                                                     MEDLINE-93015991;
                                                                                                                                                                                                                                                  MUTAGENESIS OF HISTAMINE-BINDING
                                                                                                                                                                                                                                                                                                                               MEDLINE-91110543;
                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9615;
                                                                                                                                                                                                                                                                                                                                                                                   Mammalia; Eutheria; Carnivora;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HH2R_CANFA
                                                                                                                                                                                                                                                                                       "Molecular cloning
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19 VPQTPGPSTASGVPEVGLRDVASES----VALFFMLLLDLTAVAGNAAVMAVIAKTPALR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N
                                                                               SIMILARITY: BELONGS
                                                   SWISS-PROT entry is copyright.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FFKPAPEEELRLP-SREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVD 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TWLPFFVANIVQAV-CDCISPGLFD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ASQASETLQVPRTPRPGVESADSRRLATKHSRKAL------KASLTLGILLGMFFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PVPGQCRLLASLP-----FVLVASGLTFFLPSGAICFTYCRILLAARKQAVQVASLTTGM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SVPPGCSLQWSHSAYCQLFVVVVFAVLYFLLPLLLILVVYCSMFRVARVAAMQHGPLPTWM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LCLISLDRYLLILSPLRYKLRMTPLRALALVLGAWSLAALASFLPLL--LGWHELGHARP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLGRVSWEE---GAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KF--VFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLFLSVCFVSLAILS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VPE-PGP-TANSTPAWGAGPPSAPGGSGWVAAALCVVIALTA-AANSLLIALICTQPALR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -FLPCP---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NTSNFFLVSLFTSDLMVGLVVMPPAML--NALYGRWVLARGLCLLWTAFDVMCCSASILN
                                                                                                                                                                                                         Y., Yamada
                                                                                                                                                                                                                                                                            Natl. Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----ETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLL
 non-profit
and this s
                                      the Swiss Institute of Bioinformatics
                                                                                                                                                                                                                                                                                                                                                                                               Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -RCPRERQASLASPSLRTSHSGPRPGLS-LQQVLPLPL--PPDSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                15,
15,
                                                                                                                                                                                                                                      PubMed=1356984;
                                                                                                                                                                                                                                                                            Sci.
                                                                                                                                                                                                                                                                                                                               PubMed=1703298;
                                                                                                                                                                                                                       J.,
                                                                                                                                                                                                                                                                                         of a
                                                                                                                                                                                                                                                                                                                                                                                 Chordata; Craniata; Vertebrata; Carnivora; Fissipedia; Canidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30.7%;
             institutions
                                                                                                                                                                                                                                                                                                                                                                                                                                  Last sequence update)
Last annotation updat
(H2R) (Gastric recept
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
                                                                                                                                                                                                                                                                           a gene e
U.S.A.
                                                                                                                                                                                                                        Wang
                                                                             TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.
                                                                                                                                                                                                                                                                                                                  Delvalle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         59;
                                                                                                                                                                                                                        L.-D.,
                                                                                                                                                                                                                                                                           encoding the histamine H2 receptor."; 88:429-433(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 3.5e-15;
Pred. No. 3.5e-15;
Pred. No. 3.5e-171;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -VLTWLGYCNSTMNPIIYPLFMRDFKRALGR----
                                                                                                                                                                                                                                                                                                                 J., Logsdon C.,
                                                                                                                                                                                                                                                    RESIDUES
            as long
                                                                                                                                                                                                                        Tashiro T.,
removed.
                                                   It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      359
                                                                                                                                                                                                                                                                                                                                                                                                                                     receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                   update)
          There are no restrictions ong as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                     ij.
                                                                                                                                                                                                                        Munzert G.,
                                    and the
                                                                                                                                                                                                                                                                                                                  Campbell V.,
                                                                                                         LESSER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                   Euteleostomi; Canis.
                                                                                                                                            MEDIATES
MEDIATED
                                                                                                                                                                                              the
                                                                                                      EXTENT,
                                       EMBL outstation
                                                                                                                                                                                                                          Guo Y.-J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         57;
                                                                                                                                                                                              histamine
                                                                                                                                             GASTRIC
BY G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        333
                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18;
                         its
```

```
RESULT 5
HH2R_MOUSE
ID HH2R_MOUSE
                                                       밁
                                                                         õ
                                                                                               밁
                                                                                                                  Š
                                                                                                                                         밁
                                                                                                                                                            Š
                                                                                                                                                                                   В
                                                                                                                                                                                                    δ
                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    G-protein
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                           SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCRDb; GCR_0014; ...
InterPro; IPR000276; GPCR_Rhodpsn.
Pfam; PF00001; 7tm_1; 1.
PRINTS; PR00237; GPCRRHODOPSN.
PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.
PROSITE; PS00262; G_PROTEIN_RECEP_F1_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; M32701; AAA85637.1; PIR; A39008; A39008.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               entities requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HSSP; P29274; 1MMH
                                                                                                                                                                                                                                                                                                                                                                             MUTAGEN
                                                                                                                                                                                                                                                                                                                                                                                                  MUTAGEN
                                                                                                                                                                                                                                                                                                                                                                                                            MUTAGEN
                                                                                                                                                                                                                                                                                                                                                                                                                       DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TRANSMEM
                                                                                                                                                                                                                                                 101
                                                       282
                                                                                                226
                                                                                                                                          189
                                                                                                                                                               215
                                                                                                                                                                                    134
                                                                                                                      275
                                                                                                                                                                                                        158
                                                                                                                                                                                                                             75
                                                                                                                                                                                                                                                                     22
                                                                                                                                                                                                                                                                                          43
                                                                                                                                                                                                                                                                                          SVALFEMLLLDLTAVAGNAAVMAVIAKTPALRKFV--FVFHLCLVDLLAALTLMPLAMLS 100
                                                       ALNPILYATLNRDFRTAYQQLFRC--RPASHNAQETSLRSNSSQLARN
                                                                          TSNPFFYGCLNROIRGELSKQFVCFFKPAPE--EELRLPSREGSIEEN
                                                                                                            TPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCF
                                                                                                                                          VTFYLPLLVMCITYYRIFKIARDQAKRIHHMGSWKAA--
                                                                                                                                                     LYFLLPLLILVYYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQT
: | ||||: : | :|::|| | : :|
                                                                                                                                                                                   RVAVSLVLIWVISITLSFLSIHLGWNSRNETSSFNHTIPKCKVQVN-----LVYGLVDGL
                                                                                                                                                                                                        LVASVLVGVWVKALAMASVPV-LGRVSWEEGAP--SVPPGCSLQWSHSAYCQLFVVVFAV
                                                                                                                                                                                                                                                 SSALFDHAL----FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLG 157
                                                                                                                                                                                                                                                                     SVVLTVLILI---TIAGNVVVCLAVGLNRRLRSLTNCFIVSLAITDLLLGLLVLPF----
                                                                                                                                                                                                                             -SAFYQLSCRWSFGKVFCNIYTSLDVMLCTASILNLFMISLDRYCAVTDPLRYPVLITPV 133
                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                -TIGEHKATVTLAAVMGAFIICWFPYFTVFVYRGLKGDDAINEAFEAVVLWLGYANS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            coupled
                                                                                                                                                                                                                                                                                                                                                         359
                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   135
160
181
205
235
259
268
                                                                                                                                                                                                                                                                                                                                                                                                                                190
                                                                                                                                                                                                                                                                                                                                                        A۶,
   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               receptor;
                                                                                                                                                                                                                                                                                                                                                                                                 190
174
186
                                                                                                                                                                                                                                                                                                                                                                                                                                                               190
                                                                                                                                                                                                                                                                                                                                                        40201 MW;
                                                                                                                                                                                                                                                                                                                        15.1%;
                                                                                                                                                                                                                                                                                                               56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 (POTENTIAL).
CYTOPLASMIC (POTENTE)
2 (POTENTE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Transmembrane; Glycoprotein.
EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                        Score 349; DB 1;
Pred. No. 3.2e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ESSENTIAL FOR HISTAMINE BINDING ESSENTIAL FOR TIOTIDINE BINDING H2 SELECTIVITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EXTRACELLULAR (POTENTIAL)
3 (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                      ACTIVITY.
37F36412DF5BE805 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                      D->N: ABOLISHES HISTAMINE BINDING D->A,N: ABOLISHES TIOTIDINE, BUT CIMETIDINE BINDING.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7 (POTENTIAL)
CYTOPLASMIC (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CYTOPLASMIC (POTENTIAL).
4 (POTENTIAL).
EXTRACELLULAR (POTENTIAL)
5 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                      BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                N-LINKED (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CYTOPLASMIC
6 (POTENTIA)
                                                                                                                                                                                                                                                                                                                                                                                                                                          IMPLICATED IN HISTAMINE BINDING
  PRT;
                                                                                                                                                                                                                                                                                                               Mismatches 140;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                             DIMINISHED
  358
  Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                Length 359
                                                                                                                                                                                                                                                                                                                                                                             HISTAMINE-STIMULATED
                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                (POTENTIAL)
                                                                           380
                                                       327
                                                                                                                                                                                                                                                                                                               52;
                                                                                                                                                                                                                                                                                                                                                                                                  NOT
                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                               274
                                                                                                                                                                                   188
                                                                                                                                                                                                        214
                                                                                                                                                                                                                                                                     74
                                                                                                                                          225
                                                                                                                                                                                                                                                                                                               10;
```

```
Query Match
Best Local Similarity
Matches 108; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P97292;
15-JUL-1998 (Rel. 36, 0
15-JUL-1998 (Rel. 36, 0
16-OCT-2001 (Rel. 40, 1
                                           CARBOHYD
DISULFID
SEQUENCE
                                                                                                                                              DOMAIN
TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                     TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation—the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          histamine H2 receptor gen
Genomics 37:390-394(1996)
-!- FUNCTION: THE H2 SUBC
                                                                                    SITE
                                                                                                                   SITE
                                                                                                                                      SITE
                                                                                                                                                                                                                                                                                                                                          Pfam; PF00001;
                                                                                                                                                                                                                                                                                                                                                                      EMBL; D50096; BAA08792.1; GCRDb; GCR_1155; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=97092891;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa;
                                                                                                                                                                             TRANSMEM
                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                 TRANSMEM
                                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                     TRANSMEM
                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                        TRANSMEM
                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                            TRANSMEM
                                                                                                                                                                                                                                                                                                  G-protein
                                                                                                                                                                                                                                                                                                           PROSITE; PS00237;
PROSITE; PS50262;
                                                                                                                                                                                                                                                                                                                                  PRINTS;
                                                                                                                                                                                                                                                                                                                                                            MGD; MGI:108482; Hrh2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Watanabe T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=129/OLA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Histamine
                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR000276; GPCR_Rhodpsn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Cloning,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kobayashi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACID SECRETION. THE ACTIVITY OF THIS RECEPTOR IS MEDIATED BE OF PROTEINS WHICH ACTIVATE ADENVLYL CYCLASE.
SUBCELLULAR LOCATION: Integral membrane protein.
SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.
                                                                                                                                                                                                                                                                                                                                 PR00237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Н2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           T., Inoue
                                                                                                                                                                                                                                                                                                 coupled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RNA expression,
                                          4
91
358
                                                                                                                                       Conservative
                                                                                    189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               receptor
                                            AA;
                                                                                                                                                                                                                                                                                                                                          7tm_1;
                                                                                                                                                                                                                                                                                                                                GPCRRHODOPSN
                                                                                                                                     1 receptor;
22
44
57
81
92
114
113
159
179
203
233
257
266
288
358
358
                                                                                                                                                                                                                                                                                   G_ROTEIN_RECEP_F1_2; 1.

G_PROTEIN_RECEP_F1_2; 1.

receptor; Transmembrane; Glycoprotein.
22

EXTRACELULIAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PubMed=8938453;
                                                                                                                                                                                                                                                                                                                    G_PROTEIN_RECEP_F1_1; 1.
                                                     4
173
                                                                                    189
                                                                                                                   185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ι.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                THE ACTIVITY OF THIS RECEPTOR IS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                             40379
             14.98; 27.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last annotation update)
(H2R) (Gastric receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jenkins N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and
                                             ME.
     58;
Score 345; µm
Pred. No. 5.6e
58; Mismatches
                                                                                                                                                           CYTOPLASMIC (PO
6 (POTENTIAL)
EXTRACELLULAR (
7 (POTENTIAL)
                                                                                                                                                                                                                   3 (POTENTIAL)
CYTOPLASMIC (F
                                                                                                                                                                                                                                                           1 (POTENTIAL).
CYTOPLASMIC (F
2 (POTENTIAL).
                                                      ВY
                                                                                                                           ESSENTIAL FOR HISTAMINE BINDING SIMILARITY).
                                                                                                                                                                                                                                        EXTRACELLULAR
3 (POTENTIAL).
                                                               N-LINKED (GLCNAC.
                                                                           SIMILARITY
                                                                                   IMPLICATED
                                                                                               SIMILARITY)
                                                                                                       ESSENTIAL FOR TIOTIDINE IMPLICATED IN HISTAMINE
                                                                                                                                               CYTOPLASMIC
                                                                                                                                                                                                EXTRACELLULAR 5 (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         chromosomal
                                             D3DBA81D71B6D927
                                                      SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gilbert D.J.,
                                                                                   IN HISTAMINE BINDING
             .6e-1
                                                                                                                                                                                                                                                                     (POTENTIAL).
                                                                                                                                                (POTENTIAL)
                                                                                                                                                                                      (POTENTIAL).
                                                                                                                                                                                                                              (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          location
                                                                                                                                                                  (POTENTIAL)
                                                                                                                                                                                                         (POTENTIAL)
                                                                                                                                                                                                                                                  (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IJ
                                             CRC64;
                      Length
                                                              .) (POTENTIAL)
     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Copeland N.G.,
                                                                                                       BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIATES
MEDIATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ø
     74;
                                                                                   (BY
                                                                                                                                      (BY
                                                                                                       (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GASTRIC
BY G
    Gaps
     12;
```

Ş

42 ESVALFEMLLEDLT-----AVAGNAAVMAVIAKTPALRKEV--EVEHLCLVDLLAALTLM

```
THE WAY OF THE STATE OF THE STA
                                                  EMBL; U64032; AAB53098.1; -.
GCRDb; GCR_1291; -.
InterPro; IPR000276; GPCR_Rhodpsn.
Pfam; PF00001; 7tm_1; 1.
Pfam; PF000237; GPCRRHODOPSN.
PROSITE; PS00237; G_PROTEIN_RECEP_F;
PROSITE; PS50262; G_PROTEIN_RECEP_F;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   O02666;
15-JUL-1998 (Rel. 36, C
15-JUL-1998 (Rel. 36, I
30-MAY-2000 (Rel. 39, I
                  G-protein
Multigene
                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Oryctolagus cuniculus (Rabbit).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolac
                                                                                                                                                                                                                                                                                                                                                                                          alpha 1d-adrenoceptor.";
Biochim. Biophys. Acta 1323:6-11(1997).
-!- FUNCTION: THIS ALPHA-ADRENERGIC RECEPTOR MEDIATES
                                                                                                                                                                                                                                                                                                                                                                                                                                            Suzuki F., Miyamoto S., Takita M., Oshita M., Watanabe Kakizuka A., Narumiya S., Taniguchi T., Muramatsu I.; "Cloning, functional expression and tissue distribution
                                                                                                                                                                                                                                                                                                                                                              -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=97182161; PubMed=9030207;
Suzuki F., Miyamoto S., Takita M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE-Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=9986; [1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alpha-1D adrenergic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AlaD_RABIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RABIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13
                                                                                                                                                                                                                                                                                                                                      THROUGH THE INFLUX OF EXTRACELLULAR CALCIUM.
SUBCELLULAR LOCATION: Integral membrane protein.
SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFFKP--APEEELRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QLEVVVEAVLYELLPLLLILVVYCSMERVARVAAMQHGPLPTWMETPRQRSESLSSRSTM ::: :| | | | | | : | | | : :|
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VRMTLGLVASVLVGVWVKALAMASVPVLGRVSWEE------GAPSVPPGCSLQWSHSAYC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PLAMLSSSALFDHAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIEENFLQFLQGTGCPSESWVSRPLPSPKQEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VLWLGYANSALNPILYATLNRDFRMAYQQLFHCKLASHNSHKTSLRLNNSLLSRSQSREG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EVYGLVDGMVTFYLPLLIMCVTYYRIFKIAREQAKRINHISSWKAA---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VLVTPVRVAISLVFIWVISITLSFLSI --HLGWNSRNGTRGGNDTFK--CKVQVN-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RWQEEKPLKLQ-----VWSGTELTHPQGSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PF----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FROM N.A.
                  coupled family;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -SAIYQLSFKWRFGQVFCNIYTSLDVMLCTASILNLFMISLDRYCAVTDPLRYP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
G_PROTEIN_RECEP_F1_1; 1.
G_PROTEIN_RECEP_F1_2; 1.
receptor; Transmembrane; Glyc
Phosphorylation; Lipoprotein;
101
EXTRACELLULAR (POT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -TIREHKATVTLAAVMGAFIVCWFPYFTAFVYRGLRGDDPVNEVVEGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    receptor (Alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1D-adrenoceptor).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ā
                Glycoprotein;
tein; Palmitate.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  distribution
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Oryctolagus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                              STI
                                                                                                                                                                                                                                                                                                                                                                                                                                                  of
                                                                                                                                                                                                                                                                                                                                                                                              EFFECT
                                                                                                                                                                                                                                                                                                                                                                                                                                                  rabbit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          - PSREG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    224
                                                                                                                                        RESULT 7
5H6_MOUSE
 В
                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                      QY
                                                                                                                                                                                                                                                                                                                                                                                                                             Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Sim
Matches 128;
                             5H6_MOUSE STANDARD Q9RIC8; Q9RIC8; 16-OCT-2001 (Rel. 40, L) 16-OCT-2001 (Rel. 40, L) 16-OCT-2001 (Rel. 40, L) 5-hydroxytryptamine 6 r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
TRANSMEM
                  HTR6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LIPID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TRANSMEM
                                                                                                                                                                                                                508
                                                                                                                                                                                                                                                    419
                                                                                                                                                                                                                                                                                       458
                                                                                                                                                                                                                                                                                                                                                                                              332
                                                                                                                                                                                                                                                                                                                                                                                                                                 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     119
                                                                                                                                                                                                                                                                                                                         369
                                                                                                                                                                                                                                                                                                                                                            398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
 musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAVMAVIAKTPALRKEV--FVFHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VAR--VAAMQHGPLPTWMETPRQRSES-----LSSRSTMVTSSGAPQT--TPHRTFGGG
                                                                                                                                                                                                                RRPTT----
                                                                                                                                                                                                                                                  AEETSEFLEQQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                       SAGAALPGAA----
                                                                                                                                                                                                                                                                                                                                                          FNSCVNPLIYPCSSREFKRAFLRLLRCQCRRRRRRPLWRVYGHHWRASAGGGPHPDCAL
                                                                                                                                                                                                                                                                                                                                                                                                                             LSVRLLKFSREKKAAKTLAIVVGVFVLCWFPFFFVLPLGSLFPQLKPSEGVFKVIFWLGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VARSTTRSLEAG-----VKRERGKASEVVLRIHCRGAASGADGAPGTRGAKGHTFRSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LG---WKE---PVPP-----DERFCGITEEVGYAVFSSLCSFYLPMAVIVVMYCRVYV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LGRVSWEEGAPSVPPGCSLQWSHSAYCQL----FVVVFAVLYFLLPLLLILLVYYCSMFR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LLVILSVACNRHLQTVTNYFIVNLAVADLLLSATVLPFS--ATMEVLGFWAFGRAFCDVW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SVVGAGSGEDNRSSAGEPGGAGGGGEVNGTAAVGGLVVSAQSVGVGVFLAAFILTAVAGN 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SPIPOSSG--NSSTLGRVPQTPGPSTASGVPEVGLRDVASESVAL-FFMLLLDLTAVAGN
                                                                                                                                                                                                                                                                                                                                                                                          FCFTSNPFFYGCLNRQIRGELSKQFVCFFK----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                       -RLPSREGSIEENFLQFLQGTGCPSESWVSRP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       427
576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA;
                                                                                                                         STANDARD;
                                                                                                                                                                                                                -QLRAKVSSLSHKIRAGGAQRAEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KAAVVLLAVGGOFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14.9%;
25.0%;
                                 Created)
Last sequence update)
Last annotation update)
receptor (5-HT-6) (Serotonin
                                                                                                                                                                                                                                                                                       -LALTAAPAPSSAAAPEGQAAGAGRRKPPCAFREWRLLGPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₩;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (POTENTIAL).
CYTOPLASMIC (POTENTIAL).
2 (POTENTIAL).
2 (POTENTIAL).
SYTRACELLULAR (POTENTIAL).
3 (POTENTIAL).
CYTOPLASMIC (POTENTIAL).
4 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 345; DB 1; 1
Pred. No. 8.6e-15;
5; Mismatches 198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
PALMITATE (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EXTRACELLULAR
7 (POTENTTAI)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EXTRACELLULAR (POTENTIAL)
5 (POTENTIAL).
CYTOPLASMIC (POTENTIAL).
6 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POLY-GLY.
POLY-GLY.
POLY-ARG.
21EDF1025D0144CE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CYTOPLASMIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL)
                                                                                                                         440
                                                                                                                                                                                                                                                    451
                                                                                                                         Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (POTENTIAL)
                                                                                                                                                                                                                                                                                                                       LPSPKQEPPAV--DFRIPGQI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                   receptor).
                                                                                                                                                                                                                                                                                                                                                                                            -----PAPEEEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        576;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
```

19;

177

418

457

397

283 284 밁 δ Вb S В δ В οy В δ B Ş 밁

```
Ş
밁
                                      밁
                                                       δÃ
                                                                             밁
                                                                                               Ş
                                                                                                                    밁
                                                                                                                                      Ş
                                                                                                                                                                                                  Query
Best L
                                                                                                                                                           Matches
                                                                                                                                                                                                 CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                       DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rohen R., Guthrie C.R., Heldmann D.E.A., Hamblin M.W.;

"Mutagenesis studies of the mouse 5-H76 seroconin receptor.";

Submitted (MAR-1999) to the EMBL/GenBank/DDBJ databases.

-I- FUNCTION: THIS IS ONE OF THE SEVERAL DIFFERENT RECEPTORS FOR 5-HYDROXYTRYPTAMINE (SEROTONIN), A BIOGENIC HORNONE THAT FUNCTION AS A NEUROTRANSMITTER, A HORMONE, AND A MITOGEN. THE ACTIVITY OF THIS RECEPTOR IS MEDIATED BY G PROTEINS THAT STIMULATES ADENVLATE CYCLASE. IT HAS A HIGH AFFINITY FOR TRICYCLIC PSYCHOTROPIC DRUGS
                                                                                                                                                                                                                                                                                                                                                                              Multigene
                                                                                                                                                                                                                                                                                                                                                                                                PRINTS; PRO0237; (PROSITE; PS00237; PROSITE; PS50262;
                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AF134158; AAD46490.1; -. MGD; MGI:1196627; Htr6. InterPro; IPR000276; GPCR_Rhodpsn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID-10090;
                                                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                                                                           TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                        G-protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               or send
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entitles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN-129/SVJ;
                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                             TRANSMEM
                                                                                                                                                                                                                                                                               TRANSMEM
                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                  TRANSMEM
                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A
 164
                   180
                                       104
                                                          120
                                                                              46
                                                                                                62
                                                                                                                                                                      Local
                                                                                                                                         N
                                                                                                                                                                               Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUBCELLULAR LOCATION: Integral membrane protein.
SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SWISS-PROT entry is copyright. It is produced through een the Swiss Institute of Bioinformatics and the EN
                 GRVSWEE----GAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILVVYCSMFRVAR
                                                        FLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVL 179
                                                                                               AVMAVIAKTPALRKF -- VFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYL 119
                                                                                                                                       ESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGNA 61
                                       AFDVMCCSASILNLCLISLDRYLLILSPLRYKLRMTAPRALALILGAWSLAALASFLPLL
                                                                              LLIALICTQPALRNTSNFFLVSLFTSDLMVGLVVMPPAML - - NALYGRWVLARGLCLLWT
                                                                                                                    EPGPV----NSST---PAWGPGPPPAPG-----GSGWVAAALCVVIVLTA-AANS 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             d and this statement is not removed. Usage by and for commercial s requires a license agreement (See http://www.isb-sib.ch/announce/an email to license@isb-sib.ch).
                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          non-profit institutions as long as its content
                                                                                                                                                                                                                                                                                                                                                                               family.
                                                                                                                                                                                                                                                                                                                                                                                        coupled
                                                                                                                                                                                                  440
                                                                                                                                                                                                                                                                                                            35
58
65
86
101
123
                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                167
185
                                                                                                                                                                                                  ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                    GPCRRHODOPSN
                                                                                                                                                                                                                                                                                                                                                                                        receptor;
                                                                                                                                                                                                                                                                                                                                                                                                G_PROTEIN_RECEP_F1_1; 1.
G_PROTEIN_RECEP_F1_2; 1.
                                                                                                                                                                                                             Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                  46998
                                                                                                                                                                     14.8%;
28.8%;
                                                                                                                                                                                                  X
X
                                                                                                                                                                                                                                                                                                                                     1 (POTENTIAL).
CYTOPLASMIC (POTENTIAL)
2 (POTENTIAL)
                                                                                                                                                           59;
                                                                                                                                                                                                                            EXTRACELLULAR (POTENTIAL).
5 (POTENTIAL).
CYTOPLASMIC (POTENTIAL).
6 (POTENTIAL).
EXTRACELLULAR (POTENTIAL).
7 (POTENTIAL).
CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                        Transmembrane;
                                                                                                                                                                      Pred
                                                                                                                                                                                                           BY SIMILARITY .
                                                                                                                                                                                                                                                                                                 CYTOPLASMIC
4 (POTENTIAL
                                                                                                                                                                              Score
                                                                                                                                                                                                                                                                                                                    EXTRACELLULAR (POTENTIAL)
3 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                    EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                                                                                 (POTENTIAL)
                                                                                                                                                                                                 4440CDEBE01FEF0C CRC64;
                                                                                                                                                           Mismatches
                                                                                                                                                                            344;
                                                                                                                                                                   NO.
-YVLVASGVTFFLPSGAICFTYCRILLAAR
                                                                                                                                                                       7
                                                                                                                                                                                                             (GLCNAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  There are no
                                                                                                                                                                      .8e-15
                                                                                                                                                                              DB
                                                                                                                                                                                                                                                                                                           (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                       Glycoprotein;
                                                                                                                                                           187;
                                                                                                                                                                               ٠,
                                                                                                                                                                             Length 440
                                                                                                                                                           Indels
                                                                                                                                                                                                           (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a collaboration - MBL outstation
                                                                                                                                                           66;
                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in no way
                                                                                                                                                           19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
```

```
HH2R_CAVPO
              DOMAIN
TRANSMEM
                                                                                                                                                   TRANSMEM
DOMAIN
                                                                                                                                                                                                                 G-protein
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-FEB-1996 (Rel. 33,
01-FEB-1996 (Rel. 33,
16-OCT-2001 (Rel. 40,
                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                           Pfam; PF00001; 7tm_1; PRINTS; PR00237; GPCR
                                                                                                                                                                                                                                                                                                                                                                                                                               the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (APR-1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN-HARTLEY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cavia porcellus (Guinea pig).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HH2R_CAVPO P47747;
 DOMAIN
                                             TRANSMEM
                                                          DOMAIN
                                                                           TRANSMEM
                                                                                           DOMAIN
                                                                                                         TRANSMEM
                                                                                                                         DOMAIN
                                                                                                                                       TRANSMEM
                                                                                                                                                                                                   TRANSMEM
                                                                                                                                                                                                                                               PROSITE;
                                                                                                                                                                                                                                                          PROSITE;
                                                                                                                                                                                                                                                                                                         InterPro; IPR000276; GPCR_Rhodpsn
                                                                                                                                                                                                                                                                                                                                     EMBL; U25440;
                                                                                                                                                                                                                                                                                                                                                                   or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                               between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Traiffort
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HRH2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Histamine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          œ
                                                                                                                                                                                                                                                                                                                                                                                                              s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUBCELLULAR LOCATION: Integral membrane protein. SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nitted (APR-1995) to the EMBL/GenBank/DDBJ database FUNCTION: THE H2 SUBCLASS OF HISTAMINE RECEPTORS ACID SECRETION. THE ACTIVITY OF THIS RECEPTOR IS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROTEINS WHICH ACTIVATE ADENYLYL CYCLASE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             G---GQFLLCWLPYFSFHLYVALSAQP----ISTGQVESVVTWIGYFCFTSNPFFYGCLN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KQAVQVASLTTGTATAGQALETLQVPRTPRPGMESADSRRLTTKH----SRKALKASLTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VAAMQHGPLPTWMETPRQRSESL----SSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SGGTSGLQLTAQLLLPGEA--TRDPPPPTRAPTVVNFFVTDSVEPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RQIRGELSKOFVCFFKPAPEEE--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GILLSMFFVTWLPFF----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RDFKRALGRFVPCVHCP-PEHRASPASPSMWTSHSGARPGLSLQQVLPLPLPPNSDSDSA
                                                                                                                                                                                                                                                                                                                     GCR_1168:
                                                                                                                                                                                                                                             PS00237;
PS50262;
                                                                                                                                                                                                                                                                                                                                                                                              non-profit institu
                                                                                                                                                                                                                                                                                                                                                                                   requires a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    H2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eutheria;
                                                                                                                                                                                                                             coupled
23
45
82
93
115
115
116
116
1181
1205
235
235
290
                                                                                                                                                                                                                                                                                                                                       AAA65713.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE-Liver;
                                                                                                                                                                                                                                                                           GPCRRHODOPSN
receptor;
22
44
57
81
92
114
114
1159
1180
2204
234
238
258
267
289
                                                                                                                                                                                                                                            G_PROTEIN_RECEP_F1_1; 1.
G_PROTEIN_RECEP_F1_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chordata;
                                                                                                                                                                                                                                                                                                                                                                                   license
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Last sequence update)
Last annotation update)
(H2R) (Gastric receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -VASIAQAVCDCISPGLFD-VLTWLGYCNSTMNPIIYPLFM
           4 (POTENTIAL).

4 (POTENTIAL).

EXTRACELULAR (POTENTIAL).

5 (POTENTIAL).

CYTOPLASMIC (POTENTIAL).

6 (POTENTIAL).

EXTRACELULAR (POTENTIAL).

7 (POTENTIAL).
                                                                                                                                                                                                              Transmembrane; Glycoprotein.
EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                   agreement
                                                                                                                                                                                                                                                                                                                                                                                              is not removed.
                                                                                                                                     EXTRACELLULAR
3 (POTENTIAL).
                                                                                                                                                                     CYTOPLASMIC
2 (POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hystricognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                     (POTENTIAL)
                                                                                                                                                                                                   (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              359
                                                                                                                                                                                                                                                                                                                                                                                (See http://www.isb-sib.
(POTENTIAL)
                                                                                                                                                                                 (POTENTIAL).
                                                                                                                                                   (POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                 Usage by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Caviidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IJ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIATES
MEDIATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -LRLP---
                                                                                                                                                                                                                                                                                                                                                                                                 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cavia.
                                                                                                                                                                                                                                                                                                                                                                                                 for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SREG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GASTRIC
BY G
                                                                                                                                                                                                                                                                                                                                                                                                   commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   292
```

```
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOST
                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                     HH2R_HUMAN STANDARD
P25021; Q14464;
01-MAY-1992 (Rel. 22, C
01-MAY-1992 (Rel. 22, L
01-MAR-2002 (Rel. 41, L
                                                                                                                                                                                                                                                                                                                                      _HUMAN
                                                                                                                                                                                                          Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                       "Molecular cloning
                                                                                                                                               MEDLINE-91337087;
Gantz I., Munzert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SITE
            Biochem.
                                  Nishi T., Koike T., Oka T., Maec "Identification of the promoter
                                                            TISSUE=Liver;
MEDLINE=95275318; PubMed=7755641;
                                                                                    SEQUENCE FROM N.A.
                                                                                                              Biochem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISULFID
   3
                         receptor
                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                              Histamine H2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                     335
                                                                                                                                                                                                                                                                                                                                                                                                             396
                                                                                                                                                                                                                                                                                                                                                                                                                                      286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          49 MILLIDLTAVAGNAAVMAVIAKTPALRKEV--EVEHLCLVDLLAALTLMPLAMLSSSALED 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VFIWVISITLSFLSI--HLGWNSRNETSKDNDTIVKCKVQVN----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VGVWVKALAMASVPVLGRVSWEEGAPSVPPG-----CSLQWSHSAYCQLFVVVFAVLYFL
                                                                                                                                                                                                                                                                                                                                                                                     QEDKPL
                                                                                                                                                                                                                                                                                                                                                                                                             -VSRPL
                                                                                                                                                                                                                                                                                                                                                                                                                                      ILYAALNRDFRTAYHQLFCC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                         FFYGCLNRQIRGELSKQFYCFFKPAPEEELRLP---SREGSIEENFLQFLQGTGCPSESW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TIREHKATVTLAAVMGAFIICWFPYFTVFVYRGLKGDDAVNEVFEDVVLWLGYANSALNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LPLLIMCITYFRIFKIAREQARRINHIGSWKAA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LPLLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LSCKWSFSKVFCNIYTSLDVMLCTASILNLFMISLDRYCAVTDPLRYPVLITPARVAISL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HAL----FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVHPMRYEVRMTLGLVASVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LITLILVTVAGNVVVCLAVGLNRRLRSLTNCFIVSLAVTDLLLGLLVLPF-----SAIYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
            gene.";
Biophys.
                                                                                                           Biophys.
                                                                                                                                                                         FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     359
                                                                                                                                                                                                                                                                                                                                                                                                             400
                                                                                                                                     nzert G., T
Yamada T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4
91
                                                                                                                                                                                                                                                            receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98
                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ξ
           Res.
                                                                                                             Res.
                                                                                                                                               PubMed=1714721;
G., Tashiro T.,
                                                                                                                         O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4
174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14.8%;
27.0%;
                                                                                                                         the human histamine
                                                                                                                                                                                                                                                         Last sequence update)
Last annotation update)
(H2R) (Gastric receptor
                                                                                                                                                                                                                                                                                               Created)
              Commun.
                                                                                                             Commun. 178:1386-1392(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    57;
                                               Maeda M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 343; DB 1;
Pred. No. 7.5e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY).
N-LINKED (GLCNAC. . .) (POTENTIAL)
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ESSENTIAL FOR TIOTIDINE IMPLICATED IN HISTAMINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ESSENTIAL FOR HISTAMINE SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IMPLICATED IN HISTAMINE BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIMILARITY)
                                                                                                                                                                                                                                                                                                                         PRT;
              210:616-623(1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    58DB81BD8FC3C0E9
                                     region
                                                                                                                                                 Schaeffer M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                      -RLASHNSHETSLRLNNSQ-LNRSQCQEPRW
                                                                                                                                                                                                                                                            receptor
                                                                                                                                                                                                                                                                                                                         359
                                     Futai M.;
n of the human histamine
                                                                                                                                                                                                                                                                                                                         B
                                                                                                                       H2 receptor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    146;
                                                                                                                                                                                                                                                            Ľ)
                                                                                                                                               Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EVYGLVDGLVTFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BINDING
                                                                                                                                                 L.-D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AND
(BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (BY
                                      H2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11;
 "NOVEL INSIGHTS INTO histamine H2 receptor biology.";

A. Am. J. Physiol. 273:G987-G996(1997).

A. Am. J. Physiol. 273:G987-G996(1997).

C. -!- FUNCTION: THE H2 SUBCLASS OF HISTAMINE RECEPTORS MEDIATES GASTRIC SUBCLASS OF HISTAMINE RECEPTORS MEDIATES GASTRIC NET INTO THE H2 SUBCLASS OF HISTAMINE RECEPTOR SUBLE MOTILITY ACTIVATE ADENTIFY OF THIS RECEPTOR IS MEDIATED BY COMPANY OF SIMILARITY.

C. --- SUBCELLUAR HICHARDAY (BY SIMILARITY).

C. --- SUBCELLUAR LOCATION: INTEGRAL MEDIATED PROVEN TO BE COMPANY OF MEDIATED PROVEN OF HAVE PROVEN TO BE COMPANY OF MEDIATED PROVINGENCY OF THE COMPANY OF MEDIATE AND ANTAGONISTS ARE USED IN THE EFFECTIVE THERAPY FOR ACID PROVINGENCY OF HAVE PROVEN OF MEDIATED OF MEDIATED AND ANTAGONISTS AND PARKINSONS'S DISEASE SUCH AS SCHIZOPHRENIA, ALZHEIMER'S DISEASE AND PARKINSONS'S DISEASE.

C. --- SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.
                                                                                                                                                                                                                                                                                 PIR; JH0449; JH0449
GCRDb; GCR_0176; -.
GCRDb; GCR_1836; -.
GCRDb; GCR_2080; -.
 TRANSMEM
DOMAIN
SITE
                                                                                                                                                                            PRINTS: PROUZZI, GEROMETEIN_RECEP_F1_1; 1.

PROSITE: PSS0237, G_PROTEIN_RECEP_F1_2; 1.

PROSITE: PSS0262; G_PROTEIN_RECEP_F1_2; 1.

G-protein coupled receptor; Transmembrane; Glycoprotein; Polymorphism.

DOMAIN 1 22 EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                             the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for contentities requires a license agreement (See http://www.isb-sib.ch/ar or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Orange P.R., Heath P.R., Wright S.R., Pears "Allelic variations of the human histamine NeuroReport 7:1293-1296(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Human histamine H2 receptor gene: multiple transcription initiation and tissue-specific expression1."; FEBS Lett. 451:327-331(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation.
                                                             DOMAIN
                                                                                                 TRANSMEM
                                                                                                           DOMAIN
                                                                                                                                    DOMAIN
                                                                                                                                                            DOMAIN
                                                                                                                                                                         TRANSMEM
                                                                                                                                                                                                                                    PRINTS;
                                                                                                                                                                                                                                                 Ptam;
                                                                                                                                                                                                                                                                       MIM; 142703;
                                                                                                                                                                                                                                                                                                                                   EMBL;
                                                                                                                                                                                                                                                                                                                                                           EMBL;
                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DelValle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-96414531;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE-Brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Murakami H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. MEDLINE=99297624; PubMed=10371214;
                                     DOMAIN
                                               TRANSMEM
                                                                         TRANSMEM
                                                                                      DOMAIN
                                                                                                                         TRANSMEM
                                                                                                                                                  TRANSMEM
                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=98042107; PubMed=9374694;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REVIEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF
                                                                                                                                                                                                                                                PF00001; 7tm_1;
                                                                                                                                                                                                                                                                                                                                                          M64799; AAA58647.1; -. D49783; BAA08618.1; -.
                                                                                                                                                                                                                                                                                                                                  x98133;
                                                                                                                                                                                                                                                                                                                                   AB023486; BAA84279.1; x98133; CAA66832.1; -
                                                                                                                                                                                                                                   PR00237; GPCRRHODOPSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              J.
                                                                                                                                                                                                                                                           IPR000276;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4-351 FROM N.A.,
 JH0449.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gantz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sun-Wada G., Matsumoto M., Nishi T., Wada Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PubMed=8817552;
GPCR_Rhodpsn.
                                                                                                                                                                                                                                                                                                                                               .'
                         CYTOPLASMIC (P. 6 (POTENTIAL). EXTRACELLULAR 7 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AND
                                                                       EXTRACELLULAR
5 (POTENTIAL)
CYTOPLASMIC (POTENTIAL).
ESSENTIAL FOR HISTAMINE BINDING
                                                                                                CYTOPLASMIC (
4 (POTENTIAL)
                                                                                                                                                 CYTOPLASMIC (
2 (POTENTIAL)
                                                                                                                                    EXTRACELLULAR
                                                                                                                                                                         1 (POTENTIAL)
                       (POTENTIAL)
                                                                                                                        (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           POLYMORPHISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pearson
amine H2
                                                                                                                                                                                                                                                                                                                                                                                                          (See http://www.isb-sib.ch/announce/
                                                            (POTENTIAL).
                                                                                                          (POTENTIAL).
                                                                                                                                                            (POTENTIAL).
                                  (POTENTIAL)
                                                                                   (POTENTIAL)
                                                                                                                                    (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       receptor gene.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R.C.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Futai M.;
 (BY
                                                                                                                                                                                                                                                                                                                                                                                                                        commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                9
```

Ċ,

```
á
                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                              ş
                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                             Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                     RESULT
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5H6_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 97
                                                                                                                                                                                     01-JUL-1993
01-NOV-1995
15-DEC-1998
                                                                                                                                                                                                                     5H6_RAT
P31388;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONFLICT
CONFLICT
                             STRAIN-SPRAGUE-DAWLEY; TISSUE-Striatum; MEDLINE-93196608; PubMed-7680751; MODSMA F.J. Jr., Shen Y., Ward R.P., Hamblin "Cloning and expression of a novel serotonin affinity for tricyclic psychotropic drugs."; Mol. Pharmacol. 43:320-327(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SITE
         SEQUENCE FROM
                                                                                            SEQUENCE FROM N.A.
                                                                                                                         Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                            5-hydroxytryptamine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SITE
MEDLINE-93277562;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VARIANT
                                                                                                              NCBI_TaxID-10116
                                                                                                                                                                   (ST-B17).
                                                                                                                                                                                                                                                                                    288
                                                                                                                                                                                                                                                                                                                                                 281
                                                                                                                                                                                                                                                                                                                                                                      195
                                                                                                                                                                                                                                                                                                                                                                                           221
                                                                                                                                                                                                                                                                                                                                                                                                               140
                                                                                                                                                                                                                                                                                                                                                                                                                                  164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            107
                                                                                                                                                                                                                                                     10
                                                                                                                                                                                                                                                                                                                                                                                                                                                       08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25 LAVLILITVAGNVVVCLAVGLNRRLRNLTNCFIVSLAITDLLLGLLVLPF-----SAIYQ 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   49 MLLLDLTAVAGNAAVMAVIAKTPALRKFV--FVFHLCLVDLLAALTLMPLAMLSSSALFD 106
                                                                                                                                                                                                                                                                                   YAALNRDFRTGYQQLFCC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                  VGVWVKALAMASVPV-LGRVSWEEGAPS--VPPGCSLQWSHSAYCQLFVVVFAVLYFLLP
                                                                                                                                                                                                                                                                                                       YGCLNRQIRGELSKQFVCFFKPAPEEELRLPSREG---SIEENFLQ
                                                                                                                                                                                                                                                                                                                                               GGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVL
                                                                                                                                                                                                                                                                                                                           REHKATVTLAAVMGAFIICWFPYFTAFVYRGLRGDDAINEVLEAIVLWLGYANSALNPIL
                                                                                                                                                                                                                                                                                                                                                                      LLIMCITYYRIFKVARDQAKRINHISSWKAA---
                                                                                                                                                                                                                                                                                                                                                                                         LLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTF
                                                                                                                                                                                                                                                                                                                                                                                                               VLIWVISITLSFLSIHLGWNSRNETSKGNHTTSKCKVQVN-----EVYGLVDGLVTFYLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                       LSCKWSFGKVFCNIYTSLDVMLCTASILNLFMISLDRYCAVMDPLRYPVLVTPVRVAISL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                207
359
                                                                                                                                                                                     (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       133
175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              91
217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     190
        Z
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₹
                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                         26, Created)
32, Last sequence update)
37, Last annotation update)
ne 6 receptor (5-HT-6) (Serotonin
PubMed=8389146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             174
217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      133
175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₹.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY).
ESSENTIAL FOR TIMPLICATED IN I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 340;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /FTId=VAR_009959.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIMILARITY).
IMPLICATED IN HISTAMINE BINDING (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /FTId-VAR_009960
V -> A (IN REF. '
                                                                                                                        Craniata; Vert
Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /FTId-VAR_009958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-LINKED (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIMILARITY)
                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -> A (IN REF. 4).
-> N (IN REF. 4).
-> R (IN REF. 4).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9835AE2BA60B9B0F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                    RLANRNSHKTSLRSNASQ
                                                                                                                                                                                                                                 436
                                                                                                                         Vertebrata;
thi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
.1e-14;
                                                                                                                                                                                                                                 ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TIOTIDINE BINDING H2 SELECTIVITY (B)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        134;
                                                  receptor with
                                                            X . ¥ .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ٺ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                            Sibley D.R.
                                                                                                                                                                             receptor)
                                                                                                                                                                                                                                                                                    323
                                                                                                                                    Euteleostomi;
                                                                                                                                                                                                                                                                                                         383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (POTENTIAL)
                                                                                                                          Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AND
                                                                                                                          Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                          280
                                                                                                                                                                                                                                                                                                                                                                                                                                                       139
                                                                                                                                                                                                                                                                                                                                                                                                               194
                                                                                                                                                                                                                                                                                                                                                                                                                                  220
                                                                                                                                                                                                                                                                                                                                                                      227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
```

)

δõ

2 ESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGNA

Matches

Conservative

58;

171;

Indels

97;

Gaps

20;

61

```
Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entities
or send a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Entrepean Bioinformatics Institute. There are no restuse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Leurs R., Schwartz J.-C.; "A novel rat serotonin (5-HT6) receptor: molecular localization and stimulation of cAMP accumulation." Biochem. Biophys. Res. Commun. 193:268-276(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 submitted (XXX-1993)
-i- FUNCTION: THIS I
                                                                                                                                                                                                                                                                                                                                                                                                                                             GCRDb; GCR_0719;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ruat M., Traiffort E., A
Leurs R., Schwartz J.-C.
                                                                                                                                                                                                                                                                                     TRANSMEM
                                                                                                                                                                                                                                                                                                                                                           Multigene
                                                                                                                                                                                                                                                                                                                                                                       G-protein coupled
                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCRDb;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <del>-</del> -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-WISTAR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A
                                                  SEQUENCE
                                                                                                                          CONFLICT
                                                                                                                                     CONFLICT
                                                                                                                                                  DISULFID
                                                                                                                                                              CARBOHYD
                                                                                                                                                                          DOMAIN
                                                                                                                                                                                    TRANSMEM
                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                            TRANSMEM
                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                      TRANSMEM
                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                            TRANSMEM
                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                             TRANSMEM
                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                    TRANSMEM
                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; PROSITE; PS50262; G_PROTEIN_RECEP_F1_2;
                                                                                                                                                                                                                                                                                                                                                                                                          PRINTS; PR00237; GPCRRHODOPSN
                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Martial R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CYCLASE. IT HAS A HIGH AFFINITY FOR TRICYCLIC PSYCHOTROPIC DRUGS. SUBCELULLAR LOCATION: Integral membrane protein.
TISSUE SPECIFICITY: LOCALIZED EXCLUSIVELY IN THE CENTRAL NERVOUS SYSTEM, PREDOMINANTLY IN THE CORPUS STRIATUM BUT ALSO IN VARIOUS LIMBIC AND CORTICAL REGIONS.
SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mitted (XXX-1993) to the EMBL/GenBank/DDBJ databases.
FUNCTION: THIS IS ONE OF THE SEVERAL DIFFERENT RECEPTORS FOR
5-HYDROXYTRYPTAMINE (SEROTONIN), A BIOGENIC HORMONE THAT FUNCTIONS
AS A NEUROTRANSMITTER, A HORMONE, AND A MITOGEN. THE ACTIVITY OF
THIS RECEPTOR IS MEDIATED BY G PROTEINS THAT STIMULATES ADENYLATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    L03202; AAA40618.1;
S62043; AAB26908.1;
L19656; AAA40611.1;
   al Similarity
129; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCR_0723;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   requires a license agreement (See http://www.isb-sib.ch/announce/an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                            family
                                                                                                                                                                                                                                                                                                                                                                                                                                  IPR000276; GPCR_Rhodpsn.
                                                  436
                                                                                                                          145
167
185
209
209
266
291
291
321
321
336
                                                                                                                                                                                                                                                                         35
58
65
86
101
                                                                                                                                                                                                                                                                                                                                                                                                                        7 tm_1;
                                                  A,
                                                                                                                                                                                                                                                                                                                                                                       receptor;
                                                                                                                          34
57
64
100
120
1144
1164
1184
1184
2208
2208
2208
230
230
230
180
330
                                                  46922
             14.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Arrang J.-M.,
                                                    ₹.
                                                                                                                                                                                                                                                                                                                                                                       Transmembrane; Glycoprotein;
Pred. No. 1.76
8; Mismatches
                Score 338.5;
Pred. No. 1.
                                                             PCVHCPPEHRPALPPPPCGPLTAVPDQASACSRCCLCLCRQ
TQIQTPLQGAPRACSSQPSFCCLERPPGTPHHPPGPPLWST
SLSQTLWSLRYGRIHSVPF - HASTVPRSTGQPCLPLHV
DLSQRCQTRPQLQQVLALPLPPNSDSASGGTSGLQLTAQ
LLLPGEATRDPPPTRATTVVNFFVTDSVEPEIRPHPLSSP
VN (IN REF. 1)
                                                                                                                                                                         7 (POTENTIAL)
CYTOPLASMIC (
                                                                                                                                      BY SIMILARITY.
L -> V (IN REF.
                                                                                                                                                            N-LINKED (GLCNAC. . .) (POTENTIAL).
                                                                                                                                                                                                                         CYTOPLASMIC
                                                                                                                                                                                                                                                EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                                            4 (POTENTIAL
                                                                                                                                                                                                                                                                         CYTOPLASMIC
                                                                                                                                                                                                                                                                                               EXTRACELLULAR
                                                                                                                                                                                                                                                                                                                       CYTOPLASMIC
                                                                                                                                                                                                                                                                                                                                               EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                               EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                    (POTENTIAL)
                                                    6BC00F6A3CBA5FB4
                                                                                                                                                                                                             (POTENTIAL)
                                                                                                                                                                                                                                                                                     (POTENTIAL)
                                                                                                                                                                                                                                                                                                             (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                     (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tardivel-Lacombe J.,
               .7e-14;
                                                                                                                                                                          (POTENTIAL).
                                                                                                                                                                                                                        (POTENTIAL).
                                                                                                                                                                                                                                                                        (POTENTIAL).
                                                                                                                                                                                                                                                                                                                        (POTENTIAL).
                           DΒ
                                                                                                                                                                                                                                                                                                (POTENTIAL)
                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cloning,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Diaz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              commercia]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
```

```
RESULT 11
B3AR_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-MAY-1992 (Rel. 2
01-JUN-1994 (Rel. 2
30-MAY-2000 (Rel. 3
Beta-3 adrenergic r
                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=92084710; PubMed=1721063;
Muzzin P., Revelli J.-P., Kuhne F., Gocayne
Venter J.C., Glacobino J.-P., Fraser C.M.;
                                                                                                                                                     MEDLINE-93178631; PubMed-8382630;
Bensaid M., Kaghad M., Rodriguez M., le F
"The rat beta 3-adrenergic receptor gene
FEBS Lett. 318:223-226(1993).
                                                                                                                                                                                                                                                                          Mol.
                                                                                                                                                                                                                                                                                                                              MEDLINE-92100057;
Granneman J.G., L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10116;
                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                          receptor.
                                                                                                                                                                                                                                                                                                            *Molecular cloning and
                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                               cloning
                                                                                                                                                                                                                                                                                                                                                                                                                                                   "An
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADRB3 OR ADRB3R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P26255;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B3AR_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                                                                                                         adipose tissue-specific beta-adrenergic ning and down-regulation in obesity."; Biol. Chem. 266:24053-24058(1991).
                                    SUBCELLULAR LOCATION: Integral membrane TISSUE SPECIFICITY: WHITE AND BROWN ADII
                                                                                          FUNCTION: BETA-ADEANERGIC RECEPTORS MEDIATE THE CATECHOLAMINE-INDUCED ACTIVATION OF ADENYLATE CYCLASE THROUGH THE ACTION OF PROTEINS. BETA-3 IS INVOLVED IN THE REGULATION OF LIPOLYSIS AN
  SIMILARITY:
                                                                              THERMOGENESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        --LGWHELGKARTPAPG------QCRLLASLPFVLVASGVTFFLPSGAICFTYCRIL
                                                                                                                                                                                                                                                                        Pharmacol. 40:895-899(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QTP----LQGAPRACSSQPSFCCLERPPGTPRHPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EENFLQFLQGT--GC---PSESWVSRPLPSPKQEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PLFMRDFKRALGRFLPCVHCP-PEHRPALPPPPCGPLTAVPDQASACSRCCLCLCRQTQI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCLNRQIRGELSKQFVCFFKPAPEEELRLP------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  --KASLTLGILLGMFFVTWLPFFVANIAQAV-CDCISPGLED-VLTWLGYCNSTMNPIIY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LAARKQAVQVASLTTGTAGQALETLQVPRTPRPGMESADSRRLATKHSRKAL------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RVARVAAMQHGPLPTWM------ETPRQRSESLSSRSTMVTSSGAPQTTPHRTFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GRVSWEE-GAPSVP-PGCSLQWSHSAYCQL----FVVVFAVLYFLLPLLLILVVYCSMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AFDVMCCSASILNLCLISLDRYLLILSPLRYKLRMTAPRALALILGAWSLAALASFLPLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LLIVLICTQPALRNTSNFFLVSLFTSDLMVGLVVMPPAML - - NALYGRWVLARGLCLLWT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AVMAVIAKTPALRKF--VFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYL 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EPGPV-----NSST---PAWGPGPPPAPG------GSGWVAAALCVVIVLTA-AANS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
  BELONGS TO
                                                                                                                                                                                                                                                                                                                              7; PubMed=1684635;
Lahners K.N., Chaudhry

    Last sequence update)
    Last annotation updat

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
                                                                                                                                                                                                                                                                                                            expression
  FAMILY 1 OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                            of
                                                                                                                                                                                                                                                                                                  / A.;
the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               update)
G-PROTEIN COUPLED RECEPTORS
                                                                                                                                                                                             Fur
                                    ADIPOSE TIS
                                                                                                                                                                                                                                                                                                              rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   407
                                                                                                                                                                         contains
                                                                                                                                                                                           G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    J.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                               receptor. Molecular
                                                                                                                                                                                                                                                                                                            beta
                                                                                                                                                                     Caput
ns an i
                                      TISSUES,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----SREGSI
                                                                                                                                                                                                                                                                                                            3-adrenergic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      McCombie
                                                                                            THE ACTION OF G
                                                                                                                                                                       intron.";
                                                                                                                                                                                           D.;
                                      AND DIGESTIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W. R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               264
```

日 õ B ô В QΥ В δõ B Ő В δ В δ g

```
$\times \text{T} \tex
В
                                             Qy
                                                                                                          밁
                                                                                                                                                          Qy
                                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 G-protein
Multigene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR000276; GPCR_Rhodpsn
Pfam; PF00001; 7tm_1; 1.
PRINTS; PR00237; GPCRRHODOPSN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; M74716; AAA74470.1; -. EMBL; S73473; AAB20702.1; -. EMBL; S56481; AAB25520.1; -. EMBL; S56152; AAB25521.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            or send
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.
PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HSSP; P07700;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                modified and this statement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LIPID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCRDb;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCRDb;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCRDb;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entities requires a
                                                      236
                                                                                                            173
                                                                                                                                                                                                                      113
                                                                                                                                                                                                                                                                          121
  229
                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                 55
                                                                                                                                                                                                                                                                                                                                                                                       63
                                                                                                                                                                                                                                                                                                                                                                                                                                             N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - Buropean Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way ified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S29808; S29808.
A53281; A53281.
                                                                                                                                                                                                                                                                          LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                                                                                                                                                                    VMAVIAKTPALRKF--VFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SPIPQSSGNSSTLGRVPQ-TPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGNAA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A41679; A41679
KRQRRLLRRELGREPP-EESPRSPSRSPSPATVGTPTASDGVPSCGRRPARLLPLGEHRA
                                                ----RVAAMOHGPLPTWMETPR--ORSESLSSRSTMVTSSGAPQ--TTPHR--TFGGGKA
                                                                                                                                                             RVSWEEGAPSVPPGCSLQWSHSAYCQL-----FVVVFAVLYFLLPLLLILVVYCSMFRVA
                                                                                                                                                                                                                    VDVLCVTASIETLCALAVDRYLAVTNPLRYGTLVTKRRARAAVVLVWIVSATVSFAPIMS
                                                                                                                                                                                                                                                                                                                                 VITAIARTPRLQTITNVFVTSLATADLVVGLLVMPPG--ATLALTGHWPLGATGCELWTS
                                                                                                                                                                                                                                                                                                                                                                                                                                           APWPHKNGSLAFWSDAPTLDPSAANTSGLPGV-----PWAAALAGALLALATVGGNLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCR_0732;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCR_0287;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         s requires a license agreement (See http://www.isb-sib.ch/announce/an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 family;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             coupled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           37 60
61 69
61 69
70 88
89 130
31 152
3 152
3 289
3 311
3 289
3 311
3 289
3 344
400
8 8
26
1 222
1 222
1 222
1 222
1 222
1 223
1 344
400
8 8
8 9 130
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1 328
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26
107
358
334
400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               109
131
153
176
201
223
290
312
345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1DEP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              receptor; Transmembrane; Glycoprotein; Phosphorylation; Lipoprotein; Palmitate extraceLLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14.5%;
                                                                                                          SNPRCCSFASNMPYALLSSSVSFYLPLLVMLFVYARVFVVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5 (POTENTIAL).
CYTOPLASMIC (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 33/; Pred. No. 2e-1/
Pred. No. 2e-1/
65; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 (POTENTIAL).
CYTOPLASMIC (PO
2 (POTENTIAL).
EXTRACELLULAR (
3 (POTENTIAL).
CYTOPLASMIC (PO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-LINKED (GLC
BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CYTOPLASMIC
N-LINKED (GI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EXTRACELLULAR 5 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PALMITATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EXTRACELLULAR 7 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  D588540C4B2CE813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              337; DB 1
No. 2e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MIC (POTENTIAL).
(GLCNAC. . .) (POTENTIAL)
(GLCNAC. . .) (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        188;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                 112
                                                                                                                                                                                                                                                                                                                                                                                       1.20
                                                                                                                                                                                                                                                                                                                                                                                                                                           54
                                                   285
                                                                                                                                                                                                                                                                          1.80
                                                                                                          228
                                                                                                                                                             235
287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17;
```

```
RESULT 12
B3AR_BOVIN
õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B3AR_BOVIN S:
P46626; Q28045;
O1-NOV-1995 (Rel
O1-NOV-1995 (Rel
16-OCT-2001 (Rel
        entities
or send a
                                                                                  This SWI
             use by non-profit institutions as long as its cont modified and this statement is not removed. Usage by entitles requires a license agreement (See http://www.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE-Brown adipose tissue;
MEDLINB-95324546; PubMed-7601122;
Pietri-Rouvel F., Lenzen G., Kapoor A.,
Strosberg A.D., Manning B.S.J.;
Molecular cloning and pharmacological
beta 3-adrenergic receptor ";
Eur. J. Biochem. 230:350-358(1995).
                                                                      the
                                                                                                                                                                                             Casteilla L., Muzzin P., Revelli J.-P., Ricquier D., Giacobino "Expression of beta 1- and beta 3-adrenergic-receptor messages adenylate cyclase beta-adrenergic response in bovine perirenal tissue during its transformation from brown into white fat."; Biochem. J. 297:93-97(1994).
                                                                                                                                                                                                                                                                                STRAIN-Friesian; TISSUE-Adipose tissue; MEDLINE-94107292; PubMed-7904157;
                                                                                                                                                                                                                                                                                                                                                                                                           "Rapid communication: nucleotide sequences ovine beta3-adrenergic receptor genes."; J. Anim. Sci. 78:1397-1398(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
16-CCT-2001 (Rel. 40, Last annotation update)
Beta-3 adrenergic receptor.
                                                                                                                                                                                                                                                                                                                                                         Stoffel
                                                                                                                                                                                                                                                                                                                                                                     TISSUE-Muscle;
                                                                                                                                                                                                                                                                                                               SEQUENCE OF 156-298 FROM N.A.
                                                                                                                                                                                                                                                                                                                                           Submitted
                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE OF 4-106 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Forrest R.H., Hickford J.G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN-Simmental;
MEDLINE-20292453;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bos taurus (Bovine).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADRB3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                288
                                                                                                                      SUBCELLULAR LOCATION: Integral membrane protein.
SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS
                                                                    European Bioinformatics Institute.
                                                                                                                                                                  FUNCTION: BETA-ADDENERGIC RECEPTORS MEDIATE THE INDUCED ACTIVATION OF ADENYLATE CYCLASE THROUGH PROTEINS. BETA-3 IS INVOLVED IN THE REGULATION C
                                                                SWISS-PROT entry is copyright. It is produced through a collab
een the Swiss Institute of Bioinformatics and the EMBL outst
European Bioinformatics Institute. There are no restrictions
                                                                                                                                                         THERMOGENESIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RPFPT 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RPLPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LRTLGLIMGIFSLCWLPFFLANVLRALVGPSLVPSGVFIALNWLGYANSAFNPLIY-CRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PDFR-DAFRRLLCSYGGRGPEEPRVVTFPASPVASRQNSPLNRF-----DGYEGE----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RQIRGELSKQFVCFFKPAPEEELR------LPSREGSIEENFLQFLQGTGCPSESWVS
                                                                                                                                                                                                                                                                                                                                         B., Meyer H.H.
ed (JAN-1993) t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD; Q9TS17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       PubMed=10834601;
kford J.G.H.;
                                                                                                                                                                                                                                                                                                                                        to
H.D
                                                                                                                                                                                                                                                                                                                                         the
                                                                                                                                                                                                                                                                                                                                           EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        characterization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Drumare M.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                      as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                          οf
                                                                                                                                                                                                                                                                                                                                                                                                                                         the
                                                                                                                                                                                                                                                                                                                                           databases
                                                                                                                                                                                                                                                                                                                                                                                                                                          bovine,
                                                                                                                                                                     OF LIPOLYSIS
                                                                                                                                                                                 CATECHOLAMINE-
THE ACTION OF
                                         bу
                        .isb-sib.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Archimbault
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        o
f
                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                          caprine,
                                                      18
                                                                                     a collaboration
MBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the bovine
                                          for
                                                                                  outstation
                                                                                                                                                                                                                                       J.-P.;
s and
l adipose
                           ch/announce/
                                                                                                                                                                     OF G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₽.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                346
                                                      o
                                                                    on
                                         its
way
cial
```

```
δõ
                                      Db
                                                        Ωy
                                                                              В
                                                                                                Qy
                                                                                                                      Вb
                                                                                                                                        Ş
                                                                                                                                                            В
                                                                                                                                                                               200
                                                                                                                                                                                                     Db
                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                            Db
                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                    Ър
                                                                                                                                                                                                                                                                                                      20
                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Sin
Matches 121;
                                                                                                                                                                                                                                                                                                                                                                CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HSSP; P
GCRDb;
                                                                                                                                                                                                                                                                                                                                                                                               DISULFID
LIPID
                                                                                                                                                                                                                                                                                                                                                                                                                                     TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                         TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        G-protein coupled receptor; Transmembrane; Glycoprotein; Multigene family; Phosphorylation; Lipoprotein; Palmitate
                                                                                                                                                                                                                                                                                                                                                                                                                  CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRINTS; PR00237; GPCRRHODOPSN PROSITE; PS00237; G_PROTEIN_R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR000276; (
Pfam; PF00001; 7tm_1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCRDb; GCR_0627;
GCRDb; GCR_1228;
                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                  402
                                       348
                                                          344
                                                                              289
                                                                                                                      232
                                                                                                                                                             176
                                                                                                                                                                                                     116
389
                                                                                                 284
                                                                                                                                          236
                                                                                                                                                                                181
                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                             58
                                                                                                                                                                                                                                                                63
                                                                                                                                                                                                                                                                                   ω
                                                                                                                                                                                                                                                                                                         7
AGPMOPPELD
                                                                                         KAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGC
                                                                                                                                                             K-WWRIGADAEAQRCH---SNPRCCTFASNMPYALLSSSVSFYLPLLVMLFVYARVFVVA
                                                                                                                                                                                RVSWEEGAPSVPPGCSLQWSHSAYCQL-----FVVVFAVLYFLLPLLLILVVYCSMFRVA
                                                                                                                                                                                                                        LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                                                                                           VIVAIARTPRLQTMTNVFVTSLATADLVVGLLVVPPG--ATLALTGHWPLGVTGCELWTS 115
                                                                                                                                                                                                                                                     PQSSGNSSTLGRVPQTP--GPST--ASGVPEVGLRDVASESVALFFMLLLDLTAVAGNAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 X85961; CAA59937.1; -. AF109930; AAD26149.1; -. X67214; CAA47654.1; -. P07700; IDEP.
                  SPKQEPPAVD
                                                                                                                      TRQLRLLRRELGRFPPEESPPAPSRSGSPGLAGPCASPAGVPSYGRRPARLLPLREH---
                                                                                                                                                                                                    VDVLCVTASIETLCALAVDRYLAVTNPLRYGALVTKRRALAAVVLVWVVSAAVSFAPIMS
                                                                                                                                                                                                                                                                                   PWPPGNSS-LTPWPDIPTLAPNTANASGLPGVPW----AVALAGALLALAVLATVGGNLL
                                                          LNRQIRGELSKQFVCFFKPAPEEELRL--PSREGSIEENFLQFLQGTGCPSESWVSRPLP
                                                                              RALRTLGLIMGTFTLCWLPFFVVNVVRALGGPSLVSGPTFLALNWLGYANSAFNPLIY-C
                                       RSPDFRSAF-RRLLC--RCRPEEHLAAASPPR
                                                                                                                                                                                                                                                                                                                        Similarity 28.1
21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PS50262;
                                                                                                                                         RVAAMQHGPLPTWMETPR-QRSESLSSRSTMVTSSGAP-----QTTPHRTFGGG
                                                                                                                                                                                                                                                                                                                                                                 405
                                                                                                                                                                                                                                                                                                                                                                                                                                     37
64
73
73
112
1134
156
179
204
226
3315
348
                                                                                                                                                                                                                                                                                                                                                                 AA;
                   411
398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          G_PROTEIN_RECEP_F1_1; 1
G_PROTEIN_RECEP_F1_2; 1
                                                                                                                                                                                                                                                                                                                                                                156
42903
                                                                                                                                                                                                                                                                                                                                                                                    GPCR_Rhodpsn
                                                                                                                                                                                                                                                                                                                                    14.5%;
28.1%;
                                                                                                                                                                                                                                                                                                                                                                 , WM
                                                                                                                                                                                                                                                                                                                           67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .'
                                                                                                                                                                                                                                                                                                                                                                                                                                               CYTOPLASMIC (PO
6 (POTENTIAL).
EXTRACELLULAR (
7 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                        Score 335.5; DB 1;
Pred. No. 2.4e-14;
7; Mismatches 183;
                                                                                                                                                                                                                                                                                                                                                                                            7 (POTENTIAL).
CYTOPLASMIC (POTENTIAL).
N-LINKED (GLCNAC...) (POTENTIAL).
N-LINKED (GLCNAC...) (POTENTIAL).
BY SIMILARITY.
PALMITATE (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                          PG -> HE (IN REF. 4
A -> T (IN REF. 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EXTRACELLULAR
5 (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CYTOPLASMIC
4 (POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CYTOPLASMIC
2 (POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EXTRACELLULAR
3 (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                -> T (IN REF. 4).
C93667DC1CC286F8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                       (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (POTENTIAL)
                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                             Length
                                        APSGAPTALTSP
                                                                                                                                                                                                                                                                                                                                              405;
                                                                                                                                                                                                                                                                                                                           59;
                                                                                                                                                                                                                                                                                                                         Gaps
                                       388
                                                           401
                                                                                                                                                                                235
                                                                                                                                                                                                     175
                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                        62
                                                                              347
                                                                                                 343
                                                                                                                      288
                                                                                                                                          283
                                                                                                                                                            231
                                                                                                                                                                                                                                                                                    57
                                                                                                                                                                                                                                                                                                                           18;
```

```
RESULT 13
Alabarat
ID Alaba
DE Alaba
DE Ol-MA
DT 01-MA
DT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              other species homologues.",

J. Pharmacol. Exp. Ther. 272:134-142(1995).

I. Pharmacol. Exp. Ther. 272:134-142(1995).

I. FUNCTION: THIS ALPHA-ADRENERGIC RECEPTOR MEDIATES ITS EFFECT THROUGH THE INFLUX OF EXTRACELLULAR CALCIUM.

I. SUBCELLULAR LOCATION: Integral membrane protein.

II. TISSUE SPECIFICITY: VAS DEFERENS, HIPPOCAMPUS, CEREBRAL CORTEX, AORTA, BRAIN STEM, HEART AND SPLEEN.

I. SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.
                          DOMAIN
TRANSMEM
DOMAIN
                                                                                                                                           DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                 PRINTS: PR00237; GPCRRHODOPSN.
PROSITE: PS00237; G_PROTEIN_RECEP_F1_1;
PROSITE: PS50262; G_PROTEIN_RECEP_F1_2;
G-protein coupled receptor; Transmembrar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the European Bioinformatics Institute. There are no rest use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an entities requires a license agreement (See http://www.isborsend an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-MAR-1992 (Rel. 21, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Alpha-1D adrenergic receptor (Alpha 1D-adrenoceptor) (Alpha-1A
                                                                                                                                                                                                                                                                                                                                                                                                                                               PIR; A38731; A38; GCRDb; GCR_0123; GCRDb; GCR_1534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Schwinn D.A., Johnston G.I., Page S.O., Mosley Worman N.P., Campbell S., Fidock M.D., Furness Parry-Smith D.J., Peter B., Bailey D.S., "Cloning and pharmacological characterization."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia; NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR000276; GPCR_Rhodpsn.
Pfam; PF00001; 7tm_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; L31771; AAB597
PIR; A38731; A38731.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       adrenergic receptor. chromosome 5.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lomasney J.W., Cotecchia S., Lorenz W., Leung W.-Y., Yang Feng T.L., Brownstein M., Lefkowitz R.J., Caron Yang Feng T.L., Brownstein of the cDNA for the addrenergic receptor. The gene for which is located on addrenergic receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN-SPRAGUE-DAWLEY; TISSUE-Brain MEDLINE-91177889; PubMed-1706716;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADRAID OR ADRAIA.
Rattus norvegicus (Rat).
    TRANSMEM
                                                                                                                                                                                         TRANSMEM
                                                                                                                                                                                                                                       TRANSMEM
                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                  Multigene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; M60654;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          adrenergic receptors: sequence corrections
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-95114877; PubMed-7815325;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                adrenergic receptor) (RA42).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A1AD_RAT
                                                                                             TRANSMEM
                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Biol. Chem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SWISS-PROT entry is copyright. It is produced through een the Swiss Institute of Bioinformatics and the ENEUROPEAN BIOINFORMATICS INSTITUTE. There are no resti
                                                                                                                                                                                                                                                                                  family;
    91
116
128
154
164
1187
187
208
233
246
270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAA63477.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB59704.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               266:6365-6369(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                  Phosphorylation;
    90
115
127
153
163
186
207
207
232
345
347
                                                                                                                                      1 (POTENTIAL).

CYTOPLASMIC (POTENTIAL).

2 (POTENTIAL).

EXTRACELLULAR (POTENTIAL).

3 (POTENTIAL).
                                                                                                                                                                                                                                                                             Transmembrane; Glycoprotein;
                                                                                         3 (POTENTIAL).
CYTOPLASMIC (F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           agreement (See http://www.isb-sib
EXTRACELLULAR (POTENTIAL)
5 (POTENTIAL).
CYTOPLASMIC (POTENTIAL).
6 (POTENTIAL).
                                                                                                                                                                                                                                                tion; Lipoprotein; Palmita EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cortex;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Furness L.M.,
                                                                                                                 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA for the alpha located on human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          direct comparison
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Caron M.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  alpha-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    lA-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            its
```

```
BAAR_MELGA
ID BAAR_M
AC P43141
DT 01-NOV
DT 01-NOV
DT 01-NOV
DT 01-NOV
DE Beta-4
GN ADRB4C
OS Meleag
OC Eukary
OC Archos
OX NCBI_T
RN [1]
RP SEQUEN
RA Chen X
RT "MOLec
                                                                                                                                                                                                                                                                                                                                       ğ
                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δõ
                                                                                                                                                                                                                                                                  Ъ
                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                   Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
[1]
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
MEDLINE=95014249; PubMed=7929160;
Chen X.-H., Harden T.K., Nicholas R.A.;
Chen X.-H., Anning and characterization
                                                                             MDRH4C.
Meleagris gallopavo (Common turkey).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Galliformes; Meleagrididae; Meleagris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
TRANSMEM
                                                                       Archosauria; Aves; NCBI_TaxID=9103;
                                                                                                                                               01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
01-NOV-1995 (Rel. 32, Last annotation updat
                                                                                                                                                                                        B4AR_MELGA
P43141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
DOMAIN
                                                                                                                            ADRB4C
                                                                                                                                      Beta-4C adrenergic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LIPID
                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                          443
                                                                                                                                                                                                                                                                                                                  428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              172
                                                                                                                                                                                                                                                                                                                                           388
                                                                                                                                                                                                                                                                                                                                                                   383
                                                                                                                                                                                                                                                                                                                                                                                                                   323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              112
                                                                                                                                                                                                                                                                                                                                                                                            328
                                                                                                                                                                                                                                                                                                                                                                                                                                            280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             54 LTAVAGNAAVMAVIAKTPALRKFV--FVFHLCLVDLLAALTLMPLAMLSSSALFDHALFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6 IPQSSGNSSTLGR------VPQTPGPSTASGVPEVGLRDVASESVAL-FFMLLLD
                                                                                                                                                                                                                                                                                          PAASPR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EVACRLYLELSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKAL
                                                                                                                                                                                                                                                                  PASALR 485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VYCSMFRVAR--VAAMQHGPLPTWMETPRQRSE---SLSSRSTMVTSSGAP--QTTPHRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VVSVGPLLG--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VPGATGGGAVVGTGSGEDNQSSTGEPGAAASGEVNGSAAVGGLVVSAQGVGVGVFLAAFT
                                                                                                                                                                                                                                                                                                                  HHWRASTGDARSDCAPSPRIAPPGAPLALTAHPGAGSADTPE-
                                                                                                                                                                                                                                                                                                                                         TGCPSESWVSRP--LPSPKQEPPAVDFRI----PGQIAEETSEFLEQQLTSDIIMSDSYLR
                                                                                                                                                                                                                                                                                                                                                                   WLGYFNSCVNPLIYPCSSRE-
                                                                                                                                                                                                                                                                                                                                                                                         WIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFFKPAPEEELRLPSREGSIEENFLQFLQG
                                                                                                                                                                                                                                                                                                                                                                                                                  LRSSLSVRILKFSREKKAAKTLAIVVGVFVLCWFPFFFVLPLGSLFPQLKPSEGVFKVIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MYCRVYVVARSTTRSLEAG----IKREPGKASEVVLRIHCRGAATSAKGYPGTQSSKGHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AMASYPYLGRYSWEEGAPSYPPGCSLOWSHSAYCOL----FVVVFAVLYFLLPLLLILV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RTFCDVWAAVDVLCCTASILSLCTISVDRYVGVRHSLKYPAIMTERKAAAILALLWAVAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LTAVAGNLLVILSVACNRHLQTVTNYFIVNLAVADLLLSAAVLPFS--ATMEVLGFWAFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                          448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        561 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          368
375
400
60
76
413
413
416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WKE---PVPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        374
399
561
60
76
413
421
483
                                                                                                                                      receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        59354 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                           -KAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GLY-RICH.
POLY-ARG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 335.5;
Pred. No. 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AVYGHHWRASTGDARSDCAPSPRIAPPGAPLALTAHPGAGS
ADTPETQDSVSSSRKPASA -> SLRPPLASLDRRRAFRLR
PQPSHRSPRGPSSPHCTPGCGLGRHAGDAGFGLQOSKASLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-LINKED (GLCNAC. ..)
N-LINKED (GLCNAC. ..)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (IN REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PALMITATE (POTENTIAL).
                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B6537DCAD4F7BE27 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -DERFCGITEEVGYAIFSSVCSFYLPMAVIVV
                                                                                                                                                                                                     428
                                                                                                                                                                                                                                                                                                                                                                   FKRAFLRLLRCQCRR--
                                                                                                                                                  update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               , 3e-1
                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        195;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (POTENTIAL).
                                                                                                                                                                                                                                                                                                                  -TQDSVSSSR--K
                                                                                                                                                                                                                                                                                                                                                                 -RRRRLWAVYG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                          442
                                                                                                                                                                                                                                                                                                                                                                   427
                                                                                                                                                                                                                                                                                                                                                                                         387
                                                                                                                                                                                                                                                                                                                                                                                                                  382
                                                                                                                                                                                                                                                                                                                                                                                                                                           327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19;
```

of a

novel beta-adrenergic

```
Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DISULFID
LIPID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; U13977; AAA62150.1;
EMBL; U13978; AAA62151.1;
HSSP; P07700; IDEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              G-protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Multigene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF00001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entities
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro;
                                                                                                                                                       176
302
                                                  236
                                                                                                                                                                                                       199
                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                          139
                                                                                                  244
                                                                                                                                                                                                                                                                                                                                                            62
                                                                                                                                                                                                                                                                                                                                                                                                            79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22
                                                                                                                                                                                                                                                                                                                                                                                                                                                               N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUBCELLULAR LOCATION: Integral membrane protein.
TISSUE SPECIFICITY: BROAD TISSUE DISTRIBUTION.
SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        European
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SWISS-PROT entry is copyright. It is produced through een the Swiss Institute of Bioinformatics and the EN European Bioinformatics Institute. There are no rest
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TPGPSTASGVPEVGLRDVASESVALFFMLLLD-LTAVAGNAAVMAVIAKTPALRKF--VF
PYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFFK
                                                                                                  PLPTWMETPRORSESLSSRSTMVTSSGAPQTTPHRTFG---GGKAAVVLLAVGGQFLLCWL
                                                                                                                                                  YDDPRCCDFVTNMTYAIVSSTYSFYVPLLVMIFYYVRVFAVATRHVQLIGKDKVRFLQEN
                                                                                                                                                                                                       WSHSAYCQL-----RVVVFAVLYFLLPLLLILVVYCSMFRVA-----RVAAMQHG
                                                                                                                                                                                                                                                          DRYLAITAPLQYEALVTKGRAWAVVCMVWAISAFISFLPIMNH-WWRDGADEQAVRC---
                                                                                                                                                                                                                                                                                                       ERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLGRVSWEEGAPSVPPGCSLQ
                                                                                                                                                                                                                                                                                                                                                                                                            VFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLFLSVCFVSLAILSVSAINV
                                                                                                                                                                                                                                                                                                                                                                                                                                                               TPLPAGNGSVPNCSWAAVLSRQWAVGAALSITILVIVAGNLLVIVAIAKTPRLQTMTNVF
                                                                                                                                                                                                                                                                                                                                                            VTSLACADLVMGLLVVPPG--ATILLSGHWPYGTVVCELWTSLDVLCVTASIETLCAIAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PR00237; GPCRRHODOPSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and this statement is not remrequires a license agreement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PS50262;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tamily;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 coupled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IPR000276; GPCR_Rhodpsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               329
428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -profit institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7tm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           G_PROTEIN_RECEP_F1_1; 1.
G_PROTEIN_RECEP_F1_2; 1.
receptor; Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      receptor; Transmembrane; Glycoprotein; Phosphorylation; Lipoprotein; Palmitate.
25
EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    49
58
77
97
119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 164
189
211
261
283
294
315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       47398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14.58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 335;
Pred. No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CYTOPLASMIC (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL)
N-LINKED (GLCNAC. . .) (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BY SIMILARITY.
PALMITATE (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EXTRACELLULAR (POTENTIAL)
7 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CYTOPLASMIC
6 (POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CYTOPLASMIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CYTOPLASMIC
                                                  -GGRWRRPSRLLAIKEHKALKTLGIIMGTFTLCWL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E82DC920BE3B6889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (See
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ormatics and the Interest on the Interest on the Interest on Inter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
.8e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       179;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   restrictions on it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        commercial
                                                                                                                                                                                                                                                          175
                                                                                                                                                                                                                                                                                                          198
                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   G
361
                                                                                                  301
                                                                                                                                                     235
                                                                                                                                                                                                     243
                                                                                                                                                                                                                                                                                                                                                            119
                                                  275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15;
```

 유

```
Qy
 RESULT 15
A1AD_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                  Forray C., Bard J., Weinshank S.L., Lepor H., Hartig P.R., Weinshank S.L., Gluchowski C.; "The alpha 1-adrenergic receptor that me contraction in human prostate has the pl the cloned human alpha 1c subtype."; "-1 pharmacol. 45:703-708(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A1AD_HUMAN
P25100;
01-MAY-1992
                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE From
TISSUE-Hippocampus;
MEDLINE-94239386; PubMed-8183249;
MEDLINE-94239386; PubMed-8183249;
Forray C., Bard J.A., Wetzel J.M., Chiu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bruno J.F., whittaker J., Song J., "Molecular cloning and sequencing cadrenergic receptor.";
           "Cloning of the human alpha ld-adrenergic receptor and expression of three human subtypes in SK-N-MC cells."; mol. Pharmacol. 47:977-985(1995).
                                             TISSUE-Placenta, and Prostate;
MEDLINE-95265059; PubMed-7746284;
Esbenshade T.A., Hirasawa A., Tsu
Minneman K.P., Murphy T.J.;
                                                                                                                                                                                                                                                             Schwinn D.A., Johnston G.I., Page S.O., I
Worman N.P., Campbell S., Fidock M.D., F
Parry-Smith D.J., Peter B., Bailey D.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE-Hippocampus;
MEDLINE-92028892; P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           adrenergic receptor).
ADRAID OR ADRAIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-NOV-1995 (Rel. 32, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Alpha-1D adrenergic receptor (Alpha 1D-adrenoceptor) (Alpha-1A
                                                                                             SEQUENCE FROM
                                                                                                                             Weinberg D.H., Trivedi P., Tan C.P., Mitra S
Borkowski D., Strader C.D., Bayne M.;
"Cloning, expression and characterization of
receptors alpha la, alpha lb and alpha lc.";
                                                                                                                                                                                          SEQUENCE FROM
                                                                                                                                                                                                                          other species
                                                                                                                                                                                                                                                                                               MEDLINE=95114877;
                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                     Biochem.
                                                                                                                                                                              MEDLINE=94296402; PubMed=8024574;
                                                                                                                                                                                                                                      adrenergic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (Human)
                                                                                                                                                                                                                                                 Cloning
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 276
                                                                                                                                                                                                                Pharmacol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            422
                                                                                                                                                                                                                                      and pharmacological characterization ic receptors: sequence corrections and
                                                                                                                     Biophys.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Rel. 22, Created)
(Rel. 32, Last sequence up
(Rel. 40, Last annotation
                                                                                                                                                                                       N.A.
 THIS
                                                                                                                                                                                                                Exp. Ther.
                                                                                             N.A.
                                                                                                                                                                                                                          homologues.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRRADRRLHAAPQDPQHCSC---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                PubMed=7815325;
                                                                                                                     Res.
ALPHA-ADRENERGIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Commun. 179:1485-1490(1991).
                                                                                                                     Commun.
                                                                                                                                                                                                                272:134-142(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                          Tsujimoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Berelowitz M.;
of a cDNA encoding
 RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    --AFSPRGDPMEDSKAVD---PGHLRED 373
                                                                                                                                                                                                                                                                                                                                                         mediates smooth pharmacological
                                                                                                                                                                                                                                                                        , Mosley
Furness
                                                                                                                                                                                                                                                                                                                                                                                            Branchek
                                                          ດ:
;
                                                                                                                                                                                                                                                                                                                                                                                                        G.,
                                                                                                                                                                 s.,
                                                                                                                                                                                                                                        and
                                                           Tanaka T.,
                                                                                                                                                                                                                                                                                                                                                                                                        Shapiro
 MEDIATES
                                                                                                                                          human alpha
                                                                                                                                                                                                                                      of human
nd direct c
                                                                                                                                                                                                                                                                         Г.М.,
                                                                                                                                                                  Perkins-Barrow
                                                                                                                                                                                                                                                                                                                                                                                             1-3
                                                                                                                                                                                                                                                                                                                                                                                             .
A.
                                                                                                                                                                                                                                                                                                                                                                                                      ,
E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ۵
                                                                                                                                                                                                                                                                                     Wilson
 ITS
                                                                                                                                                                                                                                                                                                                                                          properties
                                                                                                                                                                                                                                        comparison
                                                                                                                                                                                                                                                                                                                                                                       muscle
                                                           Yano
                                                                                                                                                                                                                                                 alpha-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human alpha
                                   inducible
                                                                                                                                                                                                                                                                                                                                                                                                       Tang
                                                                                                                                           adrenergic
 EFFECT
                                                                                                                                                                                                                                                                                                                                                                                                         æ
:
                                                                                                                                                                                                                                        with
                                                                                                                                                                                                                                                                                                                                                          of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Į,
```

```
뭥
                                  δ
                                                                               В
                                                                                                                    S
                                                                                                                                                                                                                                               STATE TO THE TERMINATION OF THE TREE TO THE TREE TO THE TREE THE TREE TO THE TREE TREE TREE TO THE TREE TREE T
                                                                                                                                                               Matches
                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                               CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                   CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Multigene
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCRDb;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; M76446; AAA35496.1; -.
EMBL; U03864; AAB60351.1; -.
EMBL; L31772; AAB59487.1; -.
EMBL; S70782; AAB51163.2; -.
EMBL; D29952; BAA06222.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCRDb;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRINTS; PR00237; GPCRRHODOPSN. PROSITE; PS00237; G_PROTEIN_RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR000276; GPCR_Rhodpsn.
Pfam; PF00001; 7tm_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MIM; 104219; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCRDb;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCRDb;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             between the Swiss Institute of Bioinformatics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LIPID
125 RHLQTVTNYFIVNLAVADLLLSATVLPFS--ATMEVLGFWAFGRAFCDVWAAVDVLCCTA 182
                                                                                  65
                                      71
                                                                                                     12-NSSTLGRVPQTPGPSTASGVPEVGLRDVASESVAL-FFMLLLDLTAVAGNAAVMAVIAKT 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Db; GCR_1014; -.
Db; GCR_1014; -.
Db; GCR_1244; -.
Db; GCR_1244; -.
Db; GCR_1879; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUBCELLULAR LOCATION: Integral membrane protein.
SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   THROUGH THE INFLUX OF EXTRACELLULAR CALCIUM. SUBCELLULAR LOCATION: Integral membrane prot
                                    PALRKFV--FVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLFLSVCFVSL 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCR_1883; -.
                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ps00237;
ps50262;
in coupled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    family;
                                                                                                                                                                                                                                             522
572 AA;
                                                                                                                                                                                                                                                                                                                                                   31
489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       374
381
406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  96
122
134
160
170
170
193
214
239
252
276
                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JH0447.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               y; Phosphorylation; Lipoprotein; Poperotein; Poperotei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GPCRHUOUDEN.
G_PROTEIN_RECEP_F1_1; 1.
G_PROTEIN_RECEP_F1_2; 1.
G_PROTEIN_RECEP_F1_2; 1.
I receptor; Transmembrane; Glycoprotein;
receptor; Lipoprotein; Palmilate.
                                                                                                                                                                                                                                                                     522
                                                                                                                                                                                                                                                                                                                                                     31
572
                                                                                                                                                                                                                                               60462 MW;
                                                                                                                                                                                 14.3%;
                                                                                                                                                       77;
                                                                                                                                                                                 Score 332.5;
Pred. No. 5.
                                                                                                                                                                                                                                           ETDI -> SHPAPSASGGCWGRSGDPRPSCAPKSPACRTR
SPPGARSAQCQRARPSAQCKWLCP (IN REF. 1).
R -> P (IN REF. 4).
EBEB134CF20A4988 CRC64;
                                                                                                                                                                                                                                                                                                                                                 S -> G (IN REF. 4).
KPPSAFREWRLLGPFRRPTTQLRAKVSSLSHKIRAGGAQR
                                                                                                                                                                                                                                                                                                                                                                                      MTERDLLSVSEEGPRDDSSAGGSSAGGGGSAGGAAPSEG
PAVGGVPGGAGGGGGVVCAGSGEDNRSSAGEPGSAGAGGD
VNG -> MAAALRSVMMAGYLSEWRTPTYRSTEMVQRLRM
EAVQHSTS (IN REF. 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                  AEAACAQRSEVEAVSLGVPHEVAEGATCQAYELADYSNLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PALMITATE (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EXTRACELLULAR (POTENTIAL)
                                                                                                                                                             Mismatches
                                                                                                                                                                                   . 2e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL).
                                                                                                                                                                                                      DB 1;
                                                                                                                                                             204;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and the
                                                                                                                                                                                                    Length 572;
                                                                                                                                                             Indels 101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL outstation
                                                                                                                                                         Gaps
                                                                               124
                                                                                                                                                             16;
```

```
В
                                                                                               Ş
                                                                                                                                Дb
                                                                                                                                                             γQ
                                                                                                                                                                                                 DЪ
                                                                                                                                                                                                                              ρ
                                                                                                                                                                                                                                                                  Вb
                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                              ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
Search completed: October Job time : 16 secs
                                                                                                                                                                                                 403
                                                                                                                                                                                                                                                                  343
                                                                                                                                                                                                                                                                                                                                                                                                                                   189
                                                                                                 428
                                                                                                                                  454
                                                                                                                                                                386
                                                                                                                                                                                                                                 342
                                                                                                                                                                                                                                                                                               284 --KAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFY 341
                                                                                                                                                                                                                                                                                                                                   290
                                                                                                                                                                                                                                                                                                                                                                242
                                                                                                                                                                                                                                                                                                                                                                                                  238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLGRVSWEEGA 188
                                                                                               QQLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                QGTGCPSESWVSRPLPSPKQEPPAV----
                                                                                                                                                                                                                                 GCLNRQIRGELSKQFVCFFK-------PAPEEELRLPSREGSIEENFLQFL
                                                                                                                                                                                                                                                                  EKKAAKTLAIVVGVFVLCWFPFFFVLPLGSLFPQLKPSEGVFKVIFWLGYFNSCVNPLIY
                                                                                                                                                                                                                                                                                                                                                                HGPLPTWMETPRQRSES-----LSSRSTMVTSSGA--PQTTPHRTFGGG------
                                                                                                                                                                                                                                                                                                                                                                                                  -PVPP-----DERFCGITEEAGYAVFSSVCSFYLPMAVIVVMYCRVYVVARSTTRSLE
                                                                                                                                                                                                                                                                                                                                                                                                                                 PSVPPGCSLQWSHSAYCQL-----FVVVFAVLYFLLPLLLILVVYCSMFRVAR--VAAMQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SILSLCTISVDRYVGVRHSLKYPAIMTERKAAAILALLWVVALVVSVGPLLG---WKE--
                                                               -QLRAKVSSLSHKIRAGGAQRAEA 531
                                                                                                                                                                                                 PCSSREFKRAFLRLLRCQCRRRRRRRPLWRVYGHHWRASTSGLRQDCAPSS
                                                                                                                                                                                                                                                                                                                                 AG-----VKRERGKASEVVLRIHCRGAATGADGAHGMRSAKGHTFRSSLSVRLLKFSR
                                                                                                                                  --GDAPPGAPLALTALPDPDPEPPGTPEMQAPVASRRKPPSAFREWRLLGPFRRPTT
                 21,
                 2002, 16:10:06
                                                                                                 451
                                                                                                                                                                DFRIPGQIAEETSEFLE
                                                                                                                                                                  427
                                                                                                                                                                                                                                 385
                                                                                                                                                                                                                                                                                                                                 342
                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  237
                                                                                                                                                                                                   453
                                                                                                                                                                                                                                                                                                                                                                283
```

4			
n e		· Sumpto <del>s</del>	
		a.	
		,	
	antina di Santa di S Santa di Santa di		
**************************************		-	
e view of the second se			3) 3)

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence:
                                                                                                                                                                                                                                                           Pred. No.
score grea
and is der
    2308
2106
438.5
347
347
337.5
330.5
330.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5
327.5

    No. is the number of results predicted by chance to have a
re greater than or equal to the score of the result being printed,
is derived by analysis of the total score distribution.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                          SPTREMBL_19:*

1: sp_archea:*
2: sp_bacteria
3: sp_fungd:*
4: sp_human:*
5: sp_human:*
5: sp_mammal:*
7: sp_mhc:*
8: sp_organell:
9: sp_phage:*
10: sp_plant:*
11: sp_rodent:
12: sp_virus:*
13: sp_vertebra
14: sp_unclass:
15: sp_vurus:*
16: sp_bacteris:
16: sp_bacteris:
17: sp_archeap
                                                                                                                                                                                                   Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            October 21, 2002, 16:08:11; Search time 33 Seconds (without alignments) 2364.264 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-838-028-2
2318
1 MESSPIPQSSGNSSTLGRVP.....SDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      562222 seqs, 172994929 residues
   99.6
90.9
118.9
115.0
114.4
114.2
114.2
114.2
114.1
113.1
113.9
113.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                          sp_archea:*
sp_bacteria:*
sp_fungi:*
sp_human:*
                                                                                                                                                                                                                                                                                                       sp_plant:*
sp_vrodent:*
sp_virus:*
sp_vertebrate:*
sp_unclassified:*
sp_rvirus:*
sp_bacteriap:*
sp_archeap:*
                                                                                                                                                                                                                                                                                                                                                                                                               sp_organelle:*
                                                                                                                                                                                                                                                                                                                                                                                                                                      sp_mammal:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                  sp_invertebrate:*
                                                                                                                                                                                                   Length
   ВB
                                     56661166611
                                    Q96PR4
Q9BZJ7
Q9BZJ7
Q9QX37
Q9D282
Q9TTM9
Q9GZ10
Q9GZ10
Q9GZ10
Q9GZ10
Q9GZ10
Q9GZ10
Q9GZ10
   Q90X46
Q9QW71
Q96RE8
                                                                                                                                                                                                   Ħ
                                                                                                                                                                                                                                       SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 562222
Q96pr4 homo sapien
Q9bzj8 homo sapien
Q9bzj8 homo sapien
Q9bzj7 homo sapien
Q9qx37 mus musculu
Q9t282 mus musculu
Q9t282 mus scrofa
Q9gjs6 ovis aries
Q9mz00 sus scrofa
Q63004 rattus norv
Q9gjt0 ovis aries
Q9gjt0 ovis aries
Q9gjt5 ovis aries
Q9g157 ovis aries
Q9g157 apis mellif
Q90x46 brachydanio
Q9qw71 rattus sp.
Q96re8 homo sapien
                                                                                                                                                                                                   Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  451
```

443 443 5443	100	8760	ωωυ 1 ω 4- 1		27 28 29	25 26	22 23	17 18 19 20
276.5 276.5 276.5 274.5	278.5 278.5 277.5	280.5 280.5 279.5 279	282	287 284 . 5 283	292.5 291.5 288.5	299 297 296	300 300 299.5	304 302.5 301 300
11.9		12.1 12.1 12.1		12.4	12.6 12.6 12.4			13.1 13.1 13.0
422 422 445 470	422 508 349	4 3 7 4 4 6 4 4 6 4 0 2	445	466 385	603 387 419	429 425 425	455 499 378	515 464 518 429
13 11	0 12 4	5 13	513	<b>₽</b> U Ø	<b>17.4</b> 17.	040	444	11 6
Q9N297 Q9N298 Q98842 P97842	Q9N296 Q9VCZ3 Q9UD67	042316 042315 042315 042315	Q98841 Q9VG54	Q9TSW7 Q24038 Q75963	Q9VG57 Q96KI0 Q77254	Q9MZU3, Q9UD63 Q9WZU2	060451 Q13675 096KH9	Q9DBL0 Q9GQ54 Q9MYI8 Q13729
Q9n29/ gorilla gor Q9n298 pan troglod Q98842 anguilla an P97842 rattus norv	pong dros homo	04411 mus musculu 042316 cyprinus ca 042315 cyprinus ca 044198 apis mellif	1 ang			oryct homo oryct	060451 nomo sapien Q13675 homo sapien O96kh9 homo sapien	0 mus aedes oryct homo

## ALIGNMENTS

Ωу	DЬ	νQ	Db	Qy	Дb	Qy		SQ	XW	DR	~ :	R 7	ğ K	R RP	RN	ox Ox	8	20	so	DE	말	DT.	D A	i D	RE Q9
181 RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAM 240	121 LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG 180	121 [	61 AAVMAVIAKTPALRKEVEVEHLCLVDLLAAPTLMPLAMLSSSALEDHALEGEMACRLYLE 120	61	1 MESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFEMLLLDLTAVAGN 60	1	Query Match 99.6%; Score 2308; DB 4; Length 451; Best Local Similarity 99.6%; Pred. No. 6.5e-194; Matches 449; Conservative 1; Mismatches 1; Indels 0; Gaps 0;	SEQUENCE 451 AA; 49308 MW; 4CA422D1EE7B8B82 CRC64;	Receptor.	EMBL; AF258342; AAK97826.1;		croning of a nover progenic animie receptor inte a proceduroupted	"Closing of a power by Koppel J.;	SEQUENCE FROM N.A.			Mammalia; Eutheria; Primates;			BIOGENIC AMINE RECEPTOR-LIK	01-DEC-2001 (TremBLrel. 19,	01-DEC-2001 (TrEMBI.rel 19.	01-DEC-2001 (TrEMBLiel, 19, Created)		RESULT 1 Q96PR4

밁

```
В
                                        밁
                                                          Ş
                                                                                 밁
                                                                                                    õ
                                                                                                                           В
                                                                                                                                              ş
                                                                                                                                                                    밁
                                                                                                                                                                                                                                                         RESULT
Q9BZJ8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                     δ
                                                                                                                                                                                                             Query Match
Best Local S
Matches 409
                                                                                                                                                                                                                                                      Receptor.
SEQUENCE
                                                                                                                                                                                                                                                                       InterPro: IPR000276; GPCR_Rhodpsn.

Pfam; PF00001; 7tm_1; 1.

PRINTS; PR00201; GPCRRHODOPSN.

PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; UNKNOWN_1.

PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                      rumo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammaila; Eutheria; Primates;
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                             expressed in the brain.";
Brain Res. Mol. Brain Res. 86:13-22(2001).
EMBL; AF317652; AAK12637.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17, 01-DEC-2001 (TrEMBLrel. 19, G PROTEIN-COUPLED RECEPTOR.
                                                                                                                                                                                                                                                                                                                                                            Lee D.K., Cheng R., Nguyen T., Liu Y.,
George S.R., O'Dowd B.F.;
"Identification of four novel human G |
                                                                                                                                                                                                                                                                                                                                                                         George
                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-21105913; PubMed-11165367;
                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9BZJ8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ОЭВZJ8
 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                         181
                                                              181
                                                                                   121
                                                                                                        121
                                                                                                                             61
                                                                                                                                                61
                                                                                                                                                                                                              Local Similarity 98.8
les 409; Conservative
RVSWEEGAPSVPPGCSLQWSHSAYCQLFVVVFAVLYFLLPLLLLLLVVYCSMFRVARVAAM
                                                                                             LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                                                  MESSPIPOSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ETSEFLEQQUTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RVSWEEGAPSVPPHCSLQWSHSAYCQLFVVVFAVLYFLLPLLLILLVYCSMFRVARVAAM
                                                                                   LSVCFVSLATLSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
                                                                                                                                      AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QHGPLPTWMETPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCW
                                                                                                                             AAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPLAMLSSPALFDHALFGEVACRLYLF
                                                                                                                                                                                                                                                         417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                        Ą,
                                                                                                                                                                                                                                                        45606 MW;
                                                                                                                                                                                                                      98.88;
                                                                                                                                                                                                              ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Last sequence update)
Last annotation update)
                                                                                                                                                                                                             Score 2106; DB 4;
Pred. No. 2.9e-176;
1; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; I
Catarrhini; Hominidae;
                                                                                                                                                                                                                                                        3475BD4F1A714FF2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   417
                                                                                                                                                                                                                                                                                                                                                             protein-coupled
                                                                                                                                                                                                                                                                                                                                                                                  Brown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₹
                                                                                                                                                                                                                                                                                                                                                                                 ;
;
                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                  Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                  K.R.,
                                                                                                                                                                                                              0
                                                                                                                                                                                                             Gaps
                                                                                   180
                                                                                                                            120
                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                    300
                                         240
                                                             240
                                                                                                       180
                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                              0
```

Š

RESULT

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                     Q
                                               B
                                                                      Š
                                                                                              В
                                                                                                                     δÃ
                                                                                                                                                В
                                                                                                                                                                      Q
                                                                                                                                                                                              В
                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QY
                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9BZJ7;
Q9BZJ7;
01-JUN-2001
01-JUN-2001
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                expressed in the brain.";
Brain Res. Mol. Brain Res. 86:13-22(2001).
EMBL, AF317653; AAK12638.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lee D.K., Cheng R., Nguyen T., Liu Y
George S.R., O'Dowd B.F.;
"Identification of four novel human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. MEDLINE-21105913; PubMed-11165367;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mammalia; Eutheria; NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR000276; GPCR_Rhodpsn Pfam; PF00001; 7tm_1; 1. PRINTS; PR00237; GPCRRHODOPSN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (Human Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                         Receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS50262;
                                                                                                                                                173
315
                                                                       329
                                                                                              228
                                                                                                                        269
                                                                                                                                                                        209
                                                                                                                                                                                               129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                              69
                                                                                                                                                                                                                                                                       97
                                                                                                                                                                                                                                                                                                                      40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROTEIN-COUPLED
                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ASE---SVALFFMLLLDLTAVAGNAAVMAVIAKTPALRKFVFVFHLCLVDLLAALTLMPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KPAPEEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAVDFRI
                     QGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAEETSE 424
                                                                      IGYFCFTSNPFFYGCLNRQIR----GELSKQFVCFFKPAPEEELRLPSREGSIEENFLQFL
                                                                                               ---PPLRPR--LPGGKAALAPALAVGQFAACWLPY----GCACLAPAARAAEAEAAVTW
                                                                                                           SGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTW
                                                                                                                                                RPLWALLAFALPALLLLGAYGGIFVVARRAALR-PPRPA--RGSRLRSDSLDSRLSIL--
                                                                                                                                                                      VVVFAVLYFLLPLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTS
                                                                                                                                                                                               PVL---VLTAVWAAAGLLGALSLL------GPPPAPPPA-----PARCSVLAGGLGPF
                                                                                                                                                                                                                  LGLVASVLVGVWVKALAMASVPVLGRVSWEEGAPSVPPGCSLQWSHSAYCQL-----F
                                                                                                                                                                                                                                              GLLAAPPPGLGRVRLGPAPCRAARFLSAALLPACTLGVAALGLARYRLIVHPLRPGSRPP 128
                                                                                                                                                                                                                                                                    AMLSSSAL-FDHALFGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMT
                                                                                                                                                                                                                                                                                              ASEVAGSLGLILAAVVEVGALLGNGALLVVVLRTPGLRDALYLAHLCVVDLLAAASIMPL
                                                                                                                                                                                                                                                                                                                                             al Similarity
127; Conserv
ACTPQAWHPRALLQCLQRPPEGPAVGPSEAPEQTPE
                                                                                                                                                                                                                                                                                                                                                                                            368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  s (Human).
Metazoa; Chordata; C
Meria; Primates; (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TrembLrel. 17, Created)
(TrembLrel. 17, Last seq
(TrembLrel. 19, Last ann
                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                             AA;
                                                                                                                                                                                                                                                                                                                                                                                                                    G_PROTEIN_RECEP_F1_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RECEPTOR.
                                                                                                                                                                                                                                                                                                                                                                                             37628 MW;
                                                                                                                                                                                                                                                                                                                                                        18.9%; Score 438.5; DB 4; 31.8%; Pred. No. 2.5e-30;
                                                                                                                                                                                                                                                                                                                                              55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                             9CFFF95298D12C75
                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence up
annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Y., Brown M., Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein-coupled receptors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   update)
                                                                                                                                                                                                                                                                                                                                              146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       update)
                                                                                                                                                                                                                                                                                                                                                                                               CRC64;
                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                              71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          414
                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                        328
                                                                                                                                                                                                172
                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                      96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                227
                                                                                                                                                                                                                                                                                                                                              14;
```

```
RESULT Q9D282 ID AC Q0 DT Q0 Q0 DT Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               900x37
AC 000x37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ρý
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local s
Matches 108
                                                                                                                                                                          Q9D282 PRELIMINARY;
Q9D282;
01-JUN-2001 (TrEMBLrel. 17, C
01-JUN-2001 (TrEMBLrel. 17, L
01-JUN-2001 (TrEMBLrel. 17, L
HISTAMINE RECEPTOR H 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      090x37;
01-mAY-2000 (TrEMBLrel. 13,
01-mAY-2000 (TrEMBLrel. 13,
01-DEC-2001 (TrEMBLrel. 19,
HISTAMINE H2 RECEPTOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PRO0237; GPCRRHODOPSN.

PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.

PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.

G-protein coupled receptor; Glycoprotein; Recept G-protein coupled receptor; Glycoprotein; Recept SEQUENCE 358 AA; 40284 MW; D270C2C66AB7A256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -!- SUBCELLULAR LOCATION: INTEGRAL MEMB-
-!- SIMILARITY: BELONGS TO FAMILY 1 OF
EMBL; AF019138; AAD01634.1; --
InterPro; IPR000276; GPCR_Rhodpsn.
Pfam; PF00001; 7tm_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fukushima Y., Asano T., Sugano K.;
Submitted (AUG-1997) to the EMBL/GenBank/DDBJ databases.
-!- SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN (BY SIMILARITY)
                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                           Mus musculus (Mouse).
                                                                                                                                                    HRH2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN-129SVJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q9QX37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIALKUTISVULTTLIFITVAGNVVVCLAVSLNRRLRSLTNCFIVSLAATDLLLGLLVM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RWQEEKPLKLQ-----VWSGTELTHPQGSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIEENFLOFLOGTGCPSESWVSRPLPSPKQEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ESVALFFMLLLDLT----AVAGNAAVMAVIAKTPALRKFV--FVFHLCLVDLLAALTLM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VLWLGYANSALNPILYATLNRDFRMAYQQLFHCKLASHNSHKTSLRLNNSLLSRSQSREG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFFKP--APEEELRL------PSREG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EVYGLVDGMVTFYLPLLIMCVTYYRIFKIAREQAKRINHISSWKAA---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VLVTPVRVAISLVFIWVISITLSFLSI--HLGWNSRNGTRGGNDTFK--CKVQVN----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VRMTLGLVASVLVGVWVKALAMASVPVLGRVSWEE-----GAPSVPPGCSLQWSHSAYC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PLAMLSSSALFDHAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYE 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      al Similarity
108; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -SAIYQLSFKWSFGQVFCNIYTSLDVMLCTASILNLFMISLDRYCAVTDPLRYP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -TIREHKATYTLAAVMGAFIYCWFPYFTAFVYRGLRGDDAVNEVVEGI
                                 Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15.0%;
27.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
Last sequence update)
Last annotation updat
                                                                                                                                                                                                                Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 347;
Pred. No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; I
Sciurognathi; Muridae;
                                 Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      G-PROTEIN COUPLED RECEPTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 11;
                                                                                                                                                                                                                                                                                                                                                                 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .5e-22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 358;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi;
; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         \frac{\omega}{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12;
```

```
RESULT 6
                                                                                      В
                                                                                                                                                                     DЬ
                                                                                                                                                                                                             δã
                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                                                                                                                                                                Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
Ra Aitawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
Ra Aitawa K., Izawa M., Nishi K., Kiyosawa H., Kasukawa T., Saito R.,
RA Ratico T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Lyons P., Marchionni L., Mashina J., Mazzarelli J., Mombaerts P.,
RA Wyoshaw H., Sato K., Schoenbach C., Seya T., Sakamoto N.,
Sasaki H., Sato K., Ringwald M., Rodriguez I., Sakamoto N.,
RA Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
RA Hayashi H., Sato K., Schoenbach C., Seya T., Kawaji H., Kohtsuki S.,
RA Hayashi P., Sato K., Soshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR000276; GPCR_Rhodpsn.

Pfam; PF00001; 7tm_1; 1.

PRINTS; PR00237; GPCRRHODDPSN.

PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.

PROSITE; PS00237; G_PROTEIN_RECEP_F1_2; 1.

G-protein coupled receptor; Glycoprotein; Transmembrane.

G-protein coupled receptor; BB4719084F4BDD59 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -!- SUBCELLULAR LOCATION: INTEGRAL MEMBRANE
-!- SIMILARITY: BELONGS TO FAMILY 1 OF G-PRO
EMBL; AKO20259; BAB32044.1; -.
MGD; MGI:108482; Hrh2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Functional annotation of a full-length mouse cDNA collection."; Nature 409\!:\!685\!-\!690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=C57BL/6J; TISSUE=CECUM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              [1]
SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hayashizaki Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=21085660; PubMed=11217851;
                                                                                      332
                                                                                                                             376
                                                                                                                                                                       272
                                                                                                                                                                                                               326
                                                                                                                                                                                                                                                           225
                                                                                                                                                                                                                                                                                                   266
                                                                                                                                                                                                                                                                                                                                             179
                                                                                                                                                                                                                                                                                                                                                                                       206
                                                                                                                                                                                                                                                                                                                                                                                                                               128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      108;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     VRMTLGLVASVLVGVWVKALAMASVPVLGRVSWEE-----GAPSVPPGCSLQWSHSAYC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DSIALKVTISVYLTTLIFITVAGNVVVCLAVSLNRRLRSLTNCFIVSLAATDLLLGLLVM 72
                                                                                   RWQEEKPLKLQ-----VWSGTELTHPQGSP
                                                                                                                           SIEENFLOFLOGTGCPSESWVSRPLPSPKQEP
                                                                                                                                                                                             VTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCFFKP--APEEELRL------PSREG
                                                                                                                                                                                                                                                                                                                                             EVYGLVDGMVTFYLPLLIMCVTYYRIFKIAREQAKRINHISSWKAA--
                                                                                                                                                                                                                                                                                                                                                                                     QLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTM
                                                                                                                                                                                                                                                                                                                                                                                                                             VLVTPVRVAISLVFIWVISITLSFLSI--HLGWNSRNGTRGGNDTFK--CKVQVN-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PLAMLSSSALFDHAL---FGEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYE 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ESVALFFMLLLDLT----AVAGNAAVMAVIAKTPALRKFV--FVFHLCLVDLLAALTLM
                                                                                                                                                                     VLWLGYANSALNPILYATLNRDFRMAYQQLFHCKLASHNSHKTSLRLNNSLLSRSQSREG
                                                                                                                                                                                                                                                                                               VTSSGAPQTTPHRTFGGGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SATYQLSFKWSFGQVFCNTYTSLDVMLCTASTLNLFMTSLDRYCAVTDPLRYP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                         -TIREHKATVTLAAVMGAFIVCWFPYFTAFVYRGLRGDDAVNEVVEGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15.0%;
27.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 347;
Pred. No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                      356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               G-PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 11;
.8e-22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUPLED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (BY SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RECEPTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94
                                                                                                                                                                                                                                                         271
                                                                                                                                                                                                                                                                                                                                                                                     265
                                                                                                                                                                                                                                                                                                                                                                                                                             178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 127
                                                                                                                                                                                                                                                                                                                                             224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12
```

Q9TTM9;

PRELIMINARY;

571

ξ

```
RESULT
Q9GJS6
                                                                                                                      Ş
                                                                                                                                                        Ş
                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                             ő
                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                                                                                                                   Š
 SAPE
                                                                     밁
                                                                                    S
                                                                                                      В
                                                                                                                                        В
                                                                                                                                                                        В
                                                                                                                                                                                                            g
                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                   용
                                                                                                                                                                                                                                                                                                                                                                                                                        Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-MAY-2000 (TrEMBLrel. 1
01-MAY-2000 (TrEMBLrel. 1
01-DEC-2001 (TrEMBLrel. 1
ALPHA-LD ADRENERGIC RECEP
ALPHA-1D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sus scrofa (Pig).
Eukaryota; Metazoa; (
Mammalia; Eutheria; (
NCBI_TaxID=9823;
[1]
                 Q9GJS6;
01-MAR-2001
01-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PR00237; GPCRRHODOPSN.

PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.

PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.

G-protein coupled receptor; Glycoprotein; Receptor; G-protein coupled receptor; Glycoprotein; Receptor; SEQUENCE 571 AA; 60698 MW; BACFFB5C903972B1 CRC6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Uhlen S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR000276; GPCR_Rhodpsn.
Pfam; PF00001; 7tm_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                      496
                                                                                      412
                                                                                                                                                                                            279
                                                                                                       448
                                                                                                                        364
                                                                                                                                         388
                                                                                                                                                          327
                                                                                                                                                                           328
                                                                                                                                                                                                                             226
                                                                                                                                                                                                                                              224
                                                                                                                                                                                                                                                                171
                                                                                                                                                                                                                                                                                164
                                                                                                                                                                                                                                                                                                111
                                                                                                                                                                                                                                                                                                                 106
                                                                                                                                                                                                                                                                                                                                                                                      Local Sinhes 125;
                                                                                                                                                                                                                                                                                                                                  53
                                                                                                                                                                                                                                                                                                                                                   6
                                                                                                                                                                                                                                                                                                                                                                    σ
                                                                                                                                                                                                                                                                                                                                                                                                       Match
                                                                                                                                                                                                                                                                                       GEVACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKA
                                                                                                                                                                                                                                                                                                                                                                  IPQSSGNSSTLGRVPQ------TPGPSTA----SGVPEVGLRDVASESVAL-FFMLLL
                                                                     WRLLGPFRRPTT----
                                                                                                                                                         TWIGYFCFTSNPFFYGCLNRQIRGELSKOFVCFFK------
                                                                                                                                                                                                             VMYCRVYVVARSTTRS---LEAGVKRERGKASEVVLRIHCRGSSTGTDRGHGAMRSTKGH
                                                                                                                                                                                                                                              IVVSVGPLLG--
                                                                                                                                                                                                                                                                              GRAFCDVWAAVDVLCCTASILSLCTISVDRYVGVRHSLKYPSIMTERKAAAILALLWAVA
                                                                                                                                                                                                                                                                                                                 ILMAVAGNILLVILSVACNRHLQTVTNYFIVNLAVADLLLSATVLPES--ATMEVLGEWAF
                                                                                                                                                                                                                                                                                                                                                   VPGTAGSGGVVGAGSDENNRSSAGEPGAAGAGGEVNGTAAVGGLVVSAQGVGVGVFLAAF
                                                                                     FRIPGOIAEETSEFLEQOLTSDIIMSDSYLRPAASPRLES
                                                                                                                                                                          TFRSSLSLRLLKFSREKKAAKTLAIVVGVFVLCWFPFFFVLPLGSLFPQLKPSEGVFKVI
                                                                                                                                                                                                                             VVYCSMFRVARVAAMQHGPLPTWMETPRQRSESLSSRSTMVTSS-----
                                                                                                                                                                                                                                                              LAMASVPVLGRVSWEEGAPSVPPGCSLQWSHSAYCQL----FVVVFAVLYFLLPLLLIL
                                                                                                                                                                                                                                                                                                                                  DLTAVAGNAAVMAVIAKTPALRKFV--FVFHLCLVDLLAALTLMPLAMLSSSALFDHALF
                                                                                                       PDCAPGLGAAPREAPLALPAPE-
                                                                                                                                         FWLGYFNSCVNPL1YPCSSREFKRAFLRLLRCQCHHSRRRRPLWRAYGHHWLASNGGPR
                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wraith A.;
(TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                          PRELIMINARY;
                                                                                                                      EEELRLPSREGSIEENFLQFLQGTGCPSESWVSRPLPSPKQEPPAV-D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata; Craniata; Vertebrata; Cetartiodactyla; Suina; Suidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                             14.48;
                                                                    -QLRAKVSSLSQKIRAGSAPCAEA
                                                                                                                                                                                    13,
13,
19,
16,
                                                                                                                                                                                                                                                                                                                                                                                      85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
Last sequential Last annotation
Created)
Last seq
                                                                                                                                                                                                                                                                                                                                                                                            Score 333.5; D
Pred. No. 6.3e-
                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 6.30; Mismatches
                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence up
annotation
sequence
                                                                                                                                                                                                                                              -DERFCGITEEAGYAVFSSLCSFYLPMAVIV
                          405
                                                                                                      ATDTPSAPEAQAPVVGRRKPPYSFRD
                          ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         update)
                                                                                                                                                                                                                                                                                                                                                                                                      DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                update)
                                                                                                                                                                                                                                                                                                                                                                                      201;
                                                                     530
                                                                                      451
                                                                                                                                                                                                                                                                                                                                                                                                                        CRC64;
                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                              Transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Euteleostomi;
Sus.
                                                                                                                                                                                                                            -GAPQTTPHR
                                                                                                                                                                                                                                                                                                                                                                                      109;
                                                                                                                                                         ΡĄ
                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                        411
                                                                                                                                                                                                                                                                                               170
                                                                                                                                                                           387
                                                                                                                                                                                                                                                               225
                                                                                                                                                                                                                                                                                                                 163
                                                                                                                                                                                                                                                                                                                                                                    52
                                                                                                                                                                                                                                              270
                                                                                                                                                                                                                                                                               223
                                                                                                                                                                                                                                                                                                                                                                                      17;
                                                                                                              RESULT
Q9MZ00
 RRN OCC
                                                                                                                                                                 Š
                                                                                                                                                                                  B
                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                         οy
                                                                                                                                                                                                                                                                                                                                                            뫄
                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                      176
                                                                                                                                                                                                                                                                                        116
                                                                                                                                                  348
                                                                                                                                                                  344
                                                                                                                                                                                   289
                                                                                                                                                                                                    284
                                                                                                                                                                                                                     232
                                                                                                                                                                                                                                     236
                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                        121
                                                                                                                       8
                                                                                                                                                                                                                                                                                                                          83
                                                                                                                                                                                                                                                                                                                                           63
                                                                                                                                                                                                                                                                                                                                                            ω
                                                                                                                                                                                                                                                                                                                                                                             7
```

```
Query Match
Best Local
                                                                                                                                     Q9MZ00;
Q9MZ00;
Q9MZ00;
Q1-OCT-2000 (TrEMBLre
Q1-DEC-2001 (TrEMBLre
Q1-DEC-2001 (TrEMBLRE
BETA-3-ADRENERGIC REC
Sus scrofa (Pig).
Eukaryota; Metazoa; C
Mammalia; Eutheria; C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PR00237; GECRRHODOPSN.

PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.

PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.

G-protein coupled receptor; Glycoprotein; Receptor; Tr G-protein coupled receptor; Glycoprotein Receptor; Tr G-protein Coupled Receptor; Glycoprotein Receptor; Tr G-protein Coupled Receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JUN-2001
BETA 3 ADREN
B3AR.
Ovis aries (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AF314204; AAG31167.1; -.
EMBL; AF314202; AAG31165.1; -.
InterPro; IPR000276; GPCR_Rhodpsn.
Pfam; PF00001; 7tm_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Polymorphism within Submitted (OCT-2000)
SEQUENCE FROM N.A. Smith T.R., Bidwell
                                                                                                       NCBI_TaxID=9823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Polymorphism within the ovine beta 3 adrenergic receptor Submitted (OCT-2000) to the EMBL/GenBank/DBJ databases.
-i- SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN (BY SI-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Forrest R.H., Hickford J.G.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mammalia; Eutheria;
Bovidae; Caprinae; C
NCBI_TaxID=9940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity 29.4 les 116; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TRQLRLLRRELGRFPPEESPPAPSRSGSPGPAGPYASPAGVPSYGRRPARLLPLREH---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ----RVAAMQHGPLPTWMETPR-QRSESLSSRSTMVTSSGAP-----QTTPHRTFGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           K-WWRVGADAEAQRCH---SNPRCCTFASNMPYALLSSSVSFYLPLLVMLFVYARVFVVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VMAVIAKTPALRKF--VEVEHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYLF
|: ||:|| |: || || || ||:| ::| :: || | | | |:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PWPPGNSS-LTPWPDIPTLAPNTANASGLPGVPW----AVALAGALLALAVLATVGGNLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PQSSGNSSTLGRVPQTP--GPST--ASGVPEVGLRDVASESVALFFMLLLDLTAVAGNAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RSPDFRSAF-RRLLC--RCPPEEHLAAASPPRAPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RVSWEEGAPSVPPGCSLQWSHSAYCQL-----FVVVFAVLYFLLPLLLILVVYCSMFRVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VDVLCVTASIETLCALAVDRYLAVTNPLRYGALVTKRRARAAVVLVWVVSAAVSFAPIMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VIVALARTPRIQTMTNVFVTSLATADLVVGLLVVPPG--ATLALTGHWPLGVTGCELWTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LNRQIRGELSKQFVCFFKPAPEEEL-----RLPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RALRTLGLIMGTETLCWLPFFVVNVVRALGGPSLVSGPTFLALNWLGYANSAFNPLIY-C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -2001 (TrEMBLrel. 17, ADRENERGIC RECEPTOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (Sheep).
Metazoa;
                                                                                                                                                                                                                                                                                     (TrEMBLrel. 15, (TrEMBLrel. 15, (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N.A
                                                                                                                                                                                                                                                        RECEPTOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ovis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chordata; Craniata; Vertebrata; Eutel
Cetartiodactyla; Ruminantia; Pecora;
   C
                                                                                                                                     Chordata; Craniata; Vertebrata; Cetartiodactyla; Suina; Suidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14.3%; Score 330.5; DB 6; 29.4%; Pred. No. 7.9e-21; Eive 62; Mismatches 170;
   Α.,
   Mills
                                                                                                                                                                                                                                                                                 Created)
Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last
                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
       ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           annotation
   Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                      407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    379
                                                                                                                                                                                                                                                                                                                                                                                                                                      ₹
                                                                                                                                                                                                                                                                                                                          update)
                                                                                                                                                                                                                                                                                 update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                Sus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Transmembrane.
                                                                                                                                                                             Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         405;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RECEPTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 235
```

17;

```
PRESULT PRESULT OF THE PRESULT OF TH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 125
                                                                                                                                                                                                                                                                                                                                                                   Q63004;
01-NOV-1996 (TremBLrel. 01,
01-NOV-1996 (TremBLrel. 01,
01-DEC-2001 (TremBLrel. 19,
5-HT6 SEROTONIN RECEPTOR.
                                                                                      STRAIM-SPRAGUE-DAWLEY, TISSUE-STRIATUM;
MEDLINE-96102917; PubMed-8522988;
Kohen R., Metcalf M.A., Khan N., Druck T., Huebner K., La
Meltzer H.Y., Sibley D.R., Roth B.L., Hamblin M.W.;
"Cloning, characterization, and chromosomal localization
HT6 Service of Control 1.
HT6 serotonin receptor.".
J. Neurochem. 66:47-56(1996).
-i- SUBCELULAR LOCATION: INT
-i- SIMILARITY: BELONGS TO FA
                                                                                                                                                                                                                       SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Memmalia; Eutheria; NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q63004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   G-protein coupled receptor; G
SEQUENCE 407 AA; 43610 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRINTS; PR00237; GPCRRHODOPSN.

PROSITE; PS00237; GPROTEIN_RECEP_F1_1; 1.

PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -!- SUBCELLULAR LOCATION: INTEGRAL MEMI-
-!- SIMILARITY: BELONGS TO FAMILY 1 OF
EMBL; AF274007; AAF82301.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Sus scrofa beta-3-adrenergic receptor (BAR3) gene.";
Submitted (JUN-2000) to the EMBL/GenBank/DDBJ databases.
-!- SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                              Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR000276; GPCR_Rhodpsn.
Pfam; PF00001; 7tm_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SPIPQSSGNSSTLGRVPQTPGPST-----ASGVPEVGLRDVASESVALFFMLLLD--L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ET - - LTHPAES - RQSPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SAFNPLIY-CHSPDFRSAF-RRLLC--RCGPEEHLAAASPPRAPS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCELWTSVDVLCVTASIETLCALAVDRYLAVTNPLRYGALVTKRRARAAVVLVWVVSAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VACRLYLFLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAVAGNAAVMAVIAKTPALRKE--VFVEHLCLVDLLAALTLMPLAMLSSSALFDHALFGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APWPQ--GNSS----LPPRPDVSTLAPNNANTSGLPGV-----PWAVALAGALLAPAVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SESWVSRPLPSPKQEPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FTSNPFFYGCLNRQIRGELSKQFYCFFKPAPEEELRL--PSREGSIEENFLQFLQGTGCP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PARLLPLREHRALCTLGLIMGTFTLCWLPFFVVNVVRALGGPSLVPVPAFLALNWLGYAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AVVLL------AVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YARVF----VVATSQLRLLRWELSRFPPEESPPAPSRS-QSPAPGRPWPSPAGVPSHGRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YCSMFRVARVAAMQHGPLPTW--METPRQRSESLSSRSTMVTSSGAPQTTPHRTFGGGKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VSFAPIMSK-WWRVGADAEAQRCH---SNPSCCTFASNMPYALLSSSVSFYLPLLVMLFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MASVPVLGRVSWEEGAPSVPPGCSLQWSHSAYCQL----FVVVFAVLYFLLPLLLILVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATVGGNLLVIVAIARTPRLQTMTNVFVTSLATADLVVGLLVVPPG--TTLALTGHWPLGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     al Similarity 28.6
125; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                            Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14.2%; Score 329; DB 6; L
28.6%; Pred. No. 1.1e-20;
Mismatches 177;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      396
O FAMILY 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Glycoprotein; Receptor; C6598382A9B38DD9 CRC
                                                                                                                                                                                                                                                                                                                                                                                            Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Sciurognathi; Muridae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
MEMBRANE PROTEIN (BY S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      G-PROTEIN COUPLED RECEPTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A
                                                                                                                                                                                                                                                                                                                                                                                            update)
                                                                                                                                                                                                                                                                                              Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 407;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Transmembrane
                                                                                                                                                                                                                                                                                                                  Euteleostomi;
                                                                                                                                                                                                                                                                                            Murinae;
                                                                                                                                              Lachowicz
SIMILARITY).

D RECEPTORS.
                                                                                             of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       74;
                                                                                             ۵
                                                                                                                                                                                                                                                                                              Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -GAP
                                                                                                human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                              J.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       54
                                                                                                  Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21;
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SQ DR DR DR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                 SEQUENCE FROM N.A.
Forrest R.H., Hickforovis aries beta 3 accomplete cds.";
                                                                                                                                                                                                                                                      01-MAR-2001
01-MAR-2001
01-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          G-protein
SEQUENCE
                                                                                                                                                                                                                                                                                           Q9GJTO;
"POIYMOTPHISM WITHIN the OVINE beta 3 adrenergic receptor Submitted (OCT-2000) to the EMBL/GenBank/DDBJ databases.
-!- SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN (BY SI--!- SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED HERE
                                                                                                                                                             Mammalia; Eutheria;
Bovidae; Caprinae; (
NCBI_TaxID=9940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.
PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
G-protein coupled receptor; Glycoprotein; Receptor;
SEQUENCE 438 AA; 46786 MW; DB90403892F691A9 CRC6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; L41146; AAA92633.1; -.
InterPro; IPR000276; GPCR_Rhodpsn.
Pfam; PF00001; 7tm_1; 1.
                                                                                                                                                                                                     Eukaryota; Metazoa;
                                                                                                                                                                                                                Ovis aries (Sheep).
                                                                                                                                                                                                                                B3AR.
                                                                                                                                                                                                                                          BETA 3 ADRENERGIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00001; 7tm_1; 1. PRINTS; PR00237; GPCRRHODOPSN
                                                                                        Submitted
                                                              SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                     380
                                                                                                                                                                                                                                                                                                                                                                                              372
                                                                                                                                                                                                                                                                                                                                                                                                                       321
                                                                                                                                                                                                                                                                                                                                                                                                                                             342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                               10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       --LGWHELGKARTPAPG-----QCRLLASLPFVLVASGVTFFLPSGAICFTYCRIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GRVSWEE-GAPSVP-PGCSLQWSHSAYCQL-----FVVVFAVLYFLLPLLLILVVYCSMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FLSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AVMAVIAKTPALRKF---VFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ESSPIPQSSGNSSTLGRVPQTPGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGNA
                                                                                                                                                                                                                                                                                                                                                                     SDSASGGTSGLQLTAQLLLPGEA--TRDPPPPTRATTVVNFFVTDSVEPE
                                                                                                                                                                                                                                                                                                                                                                                           SREGSIEENFLOGTGCPSESWVSRPLPSPKQEPPAVDFRIPGQIAEE
                                                                                                                                                                                                                                                                                                                                                                                                                                             -- KASLTLGILLGMFFVTWLPFFVANIAQAV-CDCISPGLFD-VLTWLGYCNSTMNPIIY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LAARKQAVQVASLTTGTAGQALETLQVPRTPRPGMESADSRRLATKHSRKAL------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RVARVAAMQHGPLPTWM------ETPRQRSESLSSRSTMVTSSGAPQTTPHRTFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AFDVMCCSASILNLCLISLDRYLLILSPLRYKLRMTAPRALALILGAWSLAALASFLPLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LLIVLICTOPAVRNTSNFFLVSLFTSDLMVGLVVMPPAML--NALYGRWVLARGLCLLWT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EPGPV-----NSST---PAWGPGPPPPAPG------GSGWVAAALCVVIVLTA-AANS
                                                                                                                                                                                                                                                                                                                                                                                                                     PLFMRDFKRALGRFLPCVHCP-PEHRASPASPSMWTSHSGARPGLSLQQVLPLPLPPNSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                       (OCT-2000)
                                                                                                                                                                                                                                         1 (TrEMBLrel. 16,
1 (TrEMBLrel. 16,
1 (TrEMBLrel. 17,
ENERGIC RECEPTOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                         N.A.
Hickford J.
                                                                                                                                                                          ; Chordata; Craniata; Vertebrata;
; Cetartiodactyla; Ruminantia; Pec
Ovis.
                                                                                                              adrenergic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14.28;
                                                                                        ç
                                                                                        the
                                                                                                                             G.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61;
                                                                                        EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                      Last sequence up
                                                                                                                                                                                                                                                                              Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No.
                                                                                                              receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   328;
1.
                                                                                                                                                                                                                                                                                                        405
                                                                                                              (B3AR)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .4e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 11;
                                                                                                                                                                                                                                                                                                        ₹
                                                                                                                                                                                                                                                                  update)
             BJ databases.
PROTEIN (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          184;
                                                                                                                                                                                                                                                      update)
                                                                                        databases
                                                                                                              gene -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                         Pecora;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                      Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Transmembrane
                                                                                                                 allele
                                                                                                                                                                                                                                                                                                                                                                                              421
  RECEPTORS
                                                                                                                                                                                         Bovoidea;
                                     gene.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          96;
                                                                                                                 'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        163
                                                                                                                                                                                                                                                                                                                                                                                                                       379
                                                                                                                                                                                                                                                                                                                                                                                                                                              371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19;
```

```
ALD DARKER REPORTED TO SERVICE OF THE SERVICE OF TH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
The Province From the Control of the EMBLY General R.H.; Hickford J.G.H.;

Af Forrest R.H., Hickford J.G.H.;

L Submitted (OCT-2000) to the EMBLYGenDank/DDBJ databases.

C-1- SUBGELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN (BY SIMILARITY).

C-1- SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.

DR EMBL; AF314203; AAG31166.1; -.

DR PRINT: PRO00276; GPCR_Rhodpsn.

DR PFIRM: PF00001; 7tm_1; 1.

DR PRINTS; PR00237; GPCRRHODDPSN.

DR PROSITE; PS00237; GPCRHODDPSN.

DR PROSITE; PS00237; GPCRHODDPSN.

DR PROSITE; PS00237; GPCRHODDPSN.

RECEP_F1_1; 1.

DR PROSITE; PS00262; G_PROTEIN_RECEP_F1_2; 1.

KW G-PROTEIN COUPLed receptor; Glycoprotein; Receptor; Transmembrane.

KW G-PROTEIN COUPLED RECEPTORE TO THE STANDARD TO THE ST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SORBORROR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-MAR-2001
01-MAR-2001
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ovis aries (Sheep).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eute:

Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora;

Bovidae; Caprinae; Ovis.

NCBI_TaxID-9940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00001; 7tm_1; 1.

PRINTS; PR00237; GPCRHODDPSN.

PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.

PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.

G-protein coupled receptor; Glycoprotein; Receptor;

SEQUENCE 405 AA; 42956 MW; 6C9FB1EBAF93C578 CRC6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9GL56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam, PF00001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BETA 3 ADRENERGIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9GL56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; AF314205; AAG31168.1; -.
EMBL; AF314201; AAG31164.1; -.
InterPro; IPR000276; GPCR_Rhodpsn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity es 116; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LNRQIRGELSKQFVCFFKPAPEEEL-----RLPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RSPDFRSAF-RRLLC--RCPPEEHLAAASPPRAPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RALRTLGLIMGTFTLCWLPFFVVNVVRALGGPSLVSGPTFLALNWLGYANSAFNPLIY-C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TRQLRLLRRELGRFPPEESPPAPSRSGSPGPAGPYASPVGVPSYGRRPARLLPLREH---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       K-WWRVGADAEAQRCH-+
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RVSWEEGAPSVPPGCSLQWSHSAYCQL----FVVVFAVLYFLLPLLLILVVYCSMFRVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VDVLCVTASIETLCALAVDRYLAVTNPLRYGALVTKRRARAAVVLVWVVSAAVSFAPIMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VIVAIARTPRLQTMTNVFVTSLATADLVVGLLVVPPG--ATLALTGHWPLGVTGCELWTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VMAVIAKTPALRKE -- VEVEHLCLVDLLAALTLMPLAMLSSSALEDHALEGEVACRLYLE 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PWPPGNSS-LTPWPDIPTLAPNTANASGLPGVPW----AVALAGALLALAVLATVGGNLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PQSSGNSSTLGRVPQTP--GPST--ASGVPEVGLRDVASESVALFFMLLLDLTAVAGNAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RVAAMQHGPLPTWMETPR-QRSESLSSRSTMVTSSGAP-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16,
19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -SNPRCCTFASNMPYALLSSSVSFYLPLLVMLFVYARVFVVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Last
Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 327.5;
Pred. No. 1.4e
51; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .4e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        on update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     171;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -QTTPHRTFGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         405;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17;
```

```
QΥ
                                                                                                   밁
                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                            A LOCAL DE LA COCCA DEL COCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
Q9GL57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                           Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9GL57;
Q9GL57;
Q1-MAR-2001
01-MAR-2001
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                               PRINTS; PRO0237; GPCRRHODOPSN.

PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.

PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.

G-protein coupled receptor; Glycoprotein; Recept G-protein coupled receptor; Glycoprotein Coupled Receptor; Glycoprotein Coupled Receptor; Glycoprotein Rec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BETA
B3AR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia; Eutheria;
Bovidae; Caprinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ovis aries (Sheep).
Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           116
                                                                                                                                                                                                                           Local Sir
hes 114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                    63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
les 115; Conser
                                                                                                   ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 ADRENERGIC
                                                                                                                                                  PQSSGNSSTLGRVPQTP--GPST--ASGVPEVGLRDVASESVALFFMLLLDLTAVAGNAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RVSWEEGAPSVPPGCSLQWSHSAYCQL----FVVVFAVLYFLLPLLLILVVYCSMFRVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LNRQIRGELSKQFVCFFKPAPEEEL-----RLPS 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             K-WWRVGADAEAQRCH---SNPRCCTFASNMPYALLSSSVSFYLPLLVMLFVYARVFVVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG
: | |: :| :| :| :| |:: |::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PQSSGNSSTLGRVPQTP--GPST--ASGVPEVGLRDVASESVALFFMLLLDLTAVAGNAA 62
                             VMAVIAKTPALRKF--VFVFHLCLVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLF
                                                                                             PWPPGNSS-LTPWPDTPTLAPNTANASGLPGVPW----AVALAGALLALAVLATVGGNLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RSPDFRSAF-RRLLC--RCPPEEHLAAASPPRAPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RALRTLGLIMGTFTLCWLPFFVVNVVRALGGPSVVSGPTFLALNWLGYANSAFNPLIY-C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TRQLRLLRRELGRFPPEESPPAPSRSGSPGPAGPYASPAGVPSYGRRPARLLPLREH---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VDVLCVTASIETLCALAVDRYLAVTNPLRYGALVTKRRARAAVVLVWVVSAAVSFAPIMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VIVAIARTPRLQTMTNVFVTSLATADLVVGLLVVPPG--ATLALTGHWPLGVTGCELWTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PWPPGNSS-LTPWPDIPTLAPNTANASGLPGVPW----AVALAGALLALAVLATAGGNLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VMAVIAKTPALRKF--VFVFHLCLVDLLAALTLMPLAMLSSSALEDHALFGEVACRLYLF 120
                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -RVAAMQHGPLPTWMETPR-QRSESLSSRSTMVTSSGAP-----QTTPHRTFGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (TrEMBLrel.
                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
<del>..</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ovis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chordata; Craniata; Vertebrata; Eute
Cetartiodactyla; Ruminantia; Pecora;
                                                                                                                                                                                                                                                         14.18; 29.38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14.18;
29.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62;
                                                                                                                                                                                                                              61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Created)
                                                                                                                                                                                                                           Score 326.5;
Pred. No. 1.86
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 327.5;
Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.4e-20;
                                                                                                                                                                                                                           .8e-20;
es 173;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  on update)
                                                                                                                                                                                                                                                                                                                                                                                       Receptor;
                                                                                                                                                                                                                                                                                          DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 6;
::
                                                                                                                                                                                                                                                                                       6.
                                                                                                                                                                                                                                                                                                                                                            CRC64;
                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                          Transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        405;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bovoidea;
                                                                                                                                                                                                                              41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         47;
                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                            62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      115
                                                                                                   57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           283
                                                                                                                                                                                                                              16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17;
```

```
RESULT 13
Q9NG02
ID Q9NG0
AC Q9NG0
DT 01-OC
DT 01-OC
DT 01-DE
G-PRC
GN TYR1.
OS Aplis
OC Ptcyy
OC Apold
CN (Elkar
OC Ptcyy
OC Apold
RA Blena
RT "Anty
CC -1- (CC -1- (
Ş
                                                                                 δÃ
                                                                                                                                  ₽
                                                                                                                                                                      Ş
                                          В
                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q9NG02 PRELIMINARY;
Q9NG02;
Q1-QCT-2000 (TrEMBLrel. 15, C
Q1-QCT-2000 (TrEMBLrel. 15, I
Q1-DEC-2001 (TrEMBLrel. 19, I
G-PROTEIN COUPLED RECEPTOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Apis mellifera (Honeybee).
Eukaryota; Metazoa; Arthropoda; Trac
Eukaryota; Neoptera; Endopterygota;
Apoidea; Apidae; Apis.
NCBI_TaxID=7460;
                                                                                                                                                                                                                                                                                                                                                                                                        G-protein
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
MEDLINE=20155587; PubMed=10693920;
Blenau W., Balfanz S., Baumann A.;
Blenau W., Balfanz S., Baumann A.;
                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPRO00276; GPCR_Rhodpsn.

Pfam; PF00001; 7tm_1; 1.

PRINTS; PR00237; GPCRRHODOPSN.

PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1.

PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.

G-protein coupled receptor; Glycoprotein; Receptor; Tr G-protein coupled receptor; Grycoprotein; Receptor; Tr G-protein coupled receptor; F5FE4E4F13336433 CRC64;
  200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                 18
                                                                                                                                                                                                                              23
                                                                                                                                                                                                                                                                          23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          58
                                                                                                                              PGPSTASGVPEVGLRDVASESVALFFMLLLDLTAVAGNAAVMAVIAKTPALR--KEVFVF
SHSAYCQL----
                                                                                    YYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLGRVSW-EEGAPSVPPGCSLQW
                                                                                                                                                                                                                         PEEETGSNLP---VWEAAAASLTLGFLV---LATVLGNALVILSVFTYRPLRIVQNFFIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RSPDFRSAF-RRLLC--RCPPEEHLAAAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LNRQIRGELSKQFVCFFKPAPEEELRLPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVTWIGYFCFTSNPFFYGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TRQLRLLRRELGRFPPEESPPAPSRSGSPGPAGPYASPVGVPSYGRRPARLLPLREH---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    K-WWRVGADAEAORCH---SNPRCCTFASNMPYALLSSSVSFYLPLLVMLFVYARVFVVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COULCYTASIETICALAVDRYLAVTNPLRYGALVTKRRARAVVLVWVVSAAVSFAPIMS
                                            YWAITDPINYAQKRTLKRVLATIAGVWILSGAISSPPLAGWNDWPEELEPGTP-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RALRTLGLIMGTFTLCWLPFFVVNVVRALGGPSLVSGPTFLALNWLGYANSAFNPLIY-C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LSVCFVSLAILSVSAINVERYYYVVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VIVAIARTPRLQTMTNVFVTSLATADLVVGLLVVPPG--ATLALTGHWPLGVTGCELWTS
                                                                                                                                                                                                                                                                                                                       100;
                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RVAAMQHGPLPTWMETPR-QRSESLSSRSTMVTSSGAP-----QTTPHRTFGGG
                                                                                                                                                                                                                                                                                                                    Conservative
  - FVVVFAVLYFLLPLLLILVVYCSMF---
                                                                                                                                                                                                                                                                                                                                       13.9%;
                                                                                                                                                                                                                                                                                                                  64;
                                                                                                                                                                                                                                                                                                           Score 322; DB Pred. No. 4.3e 64; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
Last sequence Last anno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tracheata; Hexapoda; Insecta;
ota; Hymenoptera; Apocrita; Ac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence update)
annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       399
                                                                                                                                                                                                                                                                                                                                       DB
.3e-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                                                     3 5;
-20;
                                                                                                                                                                                                                                                                                                                  139;
                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                           Transmembrane
-RVARVAAMQ--
                                                                                                                                                                                                                                                                                                                  88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Aculeata;
                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                  134
                                                                                                                                                                                                                         76
                                                                                                                                                                                                                                                                     80
                                          187
                                                                                      199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      231
                                                                                                                                                                                                                                                                                                                  12;
```

```
RESULT
Q9QW71
ID Q9
AC Q9
DT 01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
Q90X46
                                                                                           밁
                                                                                                              Qy
                                                                                                                                              Дb
                                                                                                                                                                    Ωy
                                                                                                                                                                                                 B
                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                    Вþ
                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                               Ωy
                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                   Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뫄
                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-DEC-2001
01-DEC-2001
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Receptor.
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Brachydanio rerio (Zebrafish) (Zebra danio).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi;
Cypriniformes; Cyprinidae; Danio.
NCBI_TaxID=7955;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RE2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (OCT-2001) to the EMBL; AL590146; CAC94897.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SC:BZ2015.4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q90X46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q90x46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lloyd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SC:BZ2015.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     188
                                                                                                                    313
                                                                                                                                               233
                                                                                                                                                                                                 176
                                                                                                                                                                                                                             197
                                                                                                                                                                                                                                                      125
                                                                                                                                                                                                                                                                                144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              299
                                                   15
                                                                                           290
                                                                                                                                                                       255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14
                                                                                                                                                                                                                                                                                                         67
                                                                                                                                                                                                                                                                                                                                   84
                                                                                                                                                                                                                                                                                                                                                             12
                                                                                                                                                                                                                                                                                                                                                                                      26
                                                                                                                                                                                                                LQWSHSAYCQLFVVVFAVLYFLLPLLLILVVYCSMFRVARVAA--MQHGPLPTWMETPRQ
                                                                                                                                                                                                                                                                                                                       LVDLLAALTLMPLAMLSSSALFDHALFGEVACRLYLFLSVCFVSLAILSVSAINVERYYY
:|| :: :: | : || : || | | | | : | :: || :: || :: || |
                                                                                         LGKNSVSPQVETLVSWLSFTSAVCHPLIYGLWNKTVRKELLG--MCF
                                                                                                                                                                                                                                                                              VVHPMRYEVRMTLGLVASVLVGVWVKALAMASVPVLG-----RVSWEEGAPSVPPGCS
                                                                                                                                                                                                                                                                                                                                                            NSTNGLDDNGL--MVLESVSIIIIAIL---ACLGNLVIVVTLYKKPYLLTPSNKFVFSLT
                                                                                                                                                                                                                                                                                                                                                                            STASGVPEVGLRDVASESVALFFMLLLDLTAVAGNAAVMAVIAKTPAL--RKFVFVFHLC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SDRMVYFITWLGYVNSALNPLIYTIFNLDYR
                                                                                                                  SAQPISTGQVESVVTWIGYFCFTSNPFFYGCLNRQIRGELSKQFVCF 359
                                                                                                                                             QNNGRKNSNTSTSSSGSRKSL---IYSGSQCKAFITILVVLGTFLTTWGPYVVVISTEAL
                                                                                                                                                                                                 VSWHKEISYTAFWVTWCC----LLPLVAMLVCYGVIFRVARIKARKVYCGSVVVSQEESSS
                                                                                                                                                                                                                                                                                                         SSNLLLSVLMLPFVVASS--VRRDWMFGVVWCNFTALLHLLVSSSSMLTLGAIAIDRYYA
                                                                                                                                                                       RSESLSSRSTMVTSSGAPQTTPHRTFGGG--KAAVVLLAVGGQFLLCWLPYFSFHLYVAL
                                                                                                                                                                                                                                                      VLYPMIYPMKITGNRAVLAIVYIWLHSLVGCLPPLFGWSSFEFDRFKWT----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGQVESVVTWIGYFCFTSNPFFYGCLNRQIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RAAATTTTVYQFIEERQRISLSKERRAARTLGVIMGVFVVCWLPFFLMYVIVPFCPDCCP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RHREADDAEESVSSETNHNE----RSTPRSHAKPSLIDDEPTEVTIGGGGTTSSRRTTGS
                                                                                                                                                                                                                                                                                                                                                                                                               96; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -CQLTRRQGYVIYSSLGSFFIPLLLMSLVYLEIYLATRRRLRERARQSRINAVQST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 (TrEMBLIEL. 19, 0
1 (TrEMBLIEL. 19, 1
1 (TREMBLIEL. 19, 1
4 (NOVEL PROTEIN SI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44373 MW;
                                                                                                                                                                                                                                                                                                                                                                                                              13.7%; Score 318.5; DB: 27.7%; Pred. No. 8.8e-20 ive 69; Mismatches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HGPLPTWMETPRQRSES--LSSRSTMVTSSGAPQTTPHRTFGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , Last sequence update)
, Last annotation update)
SIMILAR TO HUMAN G-PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ٠.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GKAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5FB8875874267F00 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 13; Length
                                                                                                                                                                                                                                                                                                                                                                                                               145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          databases
                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUPLED RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                               37;
                                                                                                                                                                                                                                                      ÇŢ
                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                              196
                                                                                                                                                                                                                                                                                                         124
                                                                                                                                                                                                                                                                                                                                  143
                                                                                                                                                                                                                                                                                                                                                            66
                                                                                                                                                                                                                           254
                                                                                                                                               289
                                                                                                                                                                                                                                                      175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           282
                                                                                                                                                                                                                                                                                                                                                                                                               11;
```

Q9QW71; 01-MAY-2000

(TrEMBLrel. PRELIMINARY;

13,

Created)

559

Ą

Q9QW71

```
Search completed: October 21, 2002, 16:10:47 Job time: 37 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 102; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.

MEDILINE-92100054; PubMed-1661838;

Perez D.M., Plascik M.T., Graham R.M.;

"Solution-phase library screening for the identification of rare

"Solution-phase library screening for the identification of rare

clones: isolation of an alpha lD-adrenergic receptor cDNA.";

nol. Pharmacol. 40:876-883(1991).

MEMBRANE PROTEIN (BY SIMILARI)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE: PS00237; G_PROTEIN_RECEP_F1_1; 1.

PROSITE: PS50262; G_PROTEIN_RECEP_F1_2; 1.

G-protein coupled receptor; Glycoprotein; Transmembrane.

SEQUENCE 559 AA; 59739 MW; 37CD9BD696D3A47D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro: IPR000276; GPCR_Rhodpsn. Pfam; PF00001; 7tm_1; 1. PRINTS; PR00237; GPCRRHODDPSN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus. NCBI_TaxID=10118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
ALPHA 1-ADRENERGIC RECEPTOR SUBTYPE ALPHA 1D, ALPHA 1D-AR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -1- SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                           267
                                                                                                                                                                                                                                                                                                                                                                                       227 VYCSMFRVAR--VAAMQHGPLPTWMETPRQRSE---SLSSRSTMVTSSGAP--QTTPHRT 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                       220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       42 VPGATGGGAVVGTGSGEINQSSTGEPGAAASGEVNGSAAVGGLVVSAQGVGVGVFLAAFI 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6 IPQSSGNSSTL----GRVPQT----PGPSTA---SGVPEVGLRDVASESVAL-FFMLLLD 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                    VSVGPLLG---WKE---PVPP-----DERFCGTTEEVGYAIFSSVCSFYLPMAVIVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AMASVPVLGRVSWEEGAPSVPPGCSLQWSHSAYCQL-----FVVVFAVLYFLLPLLLILV 226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WLGYFNSCVNPLIYPCSSREFKRAFLRLLRC
                                                                                                                                                                   WIGYFCFTSNPFFYGCLNRQIRGELSKQFVC 358
                                                                                                                                                                                                                                                          FGGG-------KAAVVLLAVGGQFLLCWLPYFSFHLYVALSAQPISTGQVESVVT 327
                                                                                                                                                                                                                                                                                                                                        MYCRVYVVARSTTRSLEAG----IKREPGKASEVVLRIHCRGARTSAKGYPGTQSSKGHT 322
                                                                                                                                                                                                                             LRSSLSVRLLKFSREKKAAKTLAIVVGVFVLCWFPFFFVLPLGSIFPQIKPSEGVFKVIF 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13.7%; Score 316.5; DB 1 26.1%; Pred. No. 1.9e-19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      76; Mismatches 156; Indels 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 11; Length 559;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                       266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15;
```

Ş

Š

밁 Š 밁

S 밁 Š В Ş 밁 õ 밁